FEB 1924 Medical Lib

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Birds of a Different Feather

FROM the topmost twig of a towering tree
A hermit thrush poured melody;
While, perched on a dead limb far below,
Discordantly cawed a cynical crow.

A traveller, charmed by the vesper song
Of the woodland chorister, tarried long
But anathemas hurled at the carrion bird
Who voiced but evil and would be heard.

Now both birds sat on the self-same tree—
Drew the blessings of Nature in like degree—
But the one gave thanks with each singing breath
While the other grumbled and croaked till death.

So ever the wood-thrush' liquid lay
Brings peace to the heart at the close of day.
While the clamor of crow leaves the spirit numb,
And fearful of "things in the night" to come.

L'Envoi: If you can't carol, don't croak!

—G. H. C.

February, 1924.

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The American Journal of
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Vol. 31, No. 2 February, 1924

American Peace Award

The Winning Plan

OUR readers are familiar with the American Peace Award which was created by Edward W. Bok and which offered a prize of $100,000 for the best practicable plan by which the United States may cooperate with other nations looking toward the prevention of war.

The jury entrusted with the decision came to an agreement late in December and newspapers and other periodicals all over the country, printed the winning plan (No. 1469) either in its entirety or in digest. At the desire of Mr. Bok, the plan in brief was submitted to popular vote, most newspapers carrying ballots on which all voters might express their preference for the information of the Committee.

While it is rather late in the day, owing to the exigencies of monthly publications, we believe this movement of sufficient interest for mention on our own part, and, in the following, we shall present the salient points of the plan that has been awarded the prize and also a ballot which our readers may fill out and mail to the proper address in so far as they have not yet done so.

It is significant that, of the 22,165 competing plans and of the several hundred thousand letters that were received in addition, almost all express or imply the same conviction: That this is the time for the nations of the earth to admit frankly that war is a crime and thus withdraw the legal and moral sanction too long permitted to it as a method of settling international disputes. Thousands of plans show a deep aspiration to have the United States take the lead in a common agreement to brand war in very truth as an outlaw.

The substantial provisions which constitute the plan selected by the jury of award and upon which the vote of the American people was asked, as submitted by the policy committee, are as follows:

1.—Enter the Permanent Court

That the United States adhere to the Permanent Court of International Justice for the reasons and under the conditions stated by Secretary Hughes and President Harding in February, 1923.

Without Full Membership at Present

That without becoming a member of the League of Nations as at present constituted,

the United States Government should extend its present cooperation with the League and propose participation in the work of its Assembly and Council under the following conditions and reservations:

Safeguarding of Monroe Doctrine

1. The United States accepts the League of Nations as an instrument of mutual counsel, but it will assume no obligation to interfere with political questions of policy or internal administration of any foreign state.

In uniting its efforts with those of other States for the preservation of peace and the promotion of the common welfare, the United States insists upon the safeguarding of the Monroe Doctrine and does not abandon its traditional attitude concerning American independence of the Old World and does not consent to submit its long established policy concerning questions regarded by it as purely American to the recommendation or decision of other Powers.

No Military or Economic Force

2. The only kind of compulsion which nations can freely engage to apply to each other in the name of Peace is that which arises from conference, from moral judgment, from full publicity, and from the power of public opinion.

The United States will assume no obligations under Article X in its present form, or under Article XVI in its present form in the Covenant, or in its amended form as now proposed, unless in any particular case Congress has authorized such action.

The United States proposes that Article X and XVI be either dropped altogether or so amended and changed as to eliminate any suggestion of a general agreement to use coercion for obtaining conformity to the pledges of the Covenant.

No Obligations Under Versailles Treaty

3. The United States will accept no responsibilities under the Treaty of Versailles unless in any particular case Congress has authorized such action.

League Open to All Nations

4. The United States Government proposes that Article I of the Covenant be construed and applied, or, if necessary, redrafted, so that admission to the League shall be assured to any self-governing State that wishes to join and that receives the favorable vote of two-thirds of the Assembly.

Development of International Law

5. As a condition of its participation in the work and counsels of the League, the United States asks that the Assembly and Council consent—or obtain authority—to begin collaboration for the revision and development of international law, employing for this purpose the aid of a commission of jurists. This Commission would be directed to formulate anew existing rules of the law of nations, to reconcile divergent opinions, to consider points hitherto inadequately provided for but vital to the maintenance of international justice, and in general to define the social rights and duties of States. The recommendations of the Commission would be presented from time to time, in proper form for consideration, to the Assembly as to a recommending if not a law-making body.

THE PLAN IN BRIEF

Proposes

I. That the United States shall immediately enter the Permanent Court of International Justice, under the conditions stated by Secretary Hughes and President Harding in February, 1923.

II. That, without becoming a member of the League of Nations as at present constituted, the United States shall offer to extend its present cooperation with the League and participate in the work of the League *as a body of mutual counsel* under conditions which

1. Substitute moral force and public opinion for the military and economic force originally implied in Articles X and XVI.
2. Safeguard the Monroe Doctrine.
3. Accept the fact that the United States will assume no obligations under the Treaty of Versailles except by Act of Congress.
4. Propose that membership in the League should be opened to all nations.
5. Provide for the continuing development of international law.

THE AMERICAN JOURNAL OF CLINICAL MEDICINE, CHICAGO

Do you approve the winning plan *in substance?* Yes ☐ No ☐

(Put an X inside the proper box.)

Name .....

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Address .....

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Are you a voter?.....

Mail promptly to

THE AMERICAN PEACE AWARD

342 Madison Avenue, New York City

If you wish to express a fuller opinion also, please write to the American Peace Award.

ANOTHER COMPETING PLAN

Professor R. L. Greene, of Notre Dame, Ind., who is known to our readers through a special article entitled "The Menace of High Prices and a Rational Remedy," which was published in CLINICAL MEDICINE for August, 1923 (p. 583), believes that the dream of the ages looking to the prevention of war will be realized by the engineer and scientist through a constructive enterprise that will result in the lessening of the high cost of living, especially in so far as this is inflated through the excessively expensive methods of distribution.

As in the case of the winning plan of the American Peace Award, we can not devote the space required for the full text. However, in the following we reproduce the sum of it. This is Professor Greene's plan in brief.

Summary

Justice is the only secure foundation for peace. World peace, therefore, can be attained only by establishing justice between nations in their economic relations with each other. Unfortunately, justice in those relations is precluded to-day by a fault in our mechanism of distribution, namely, charging more for the delivery of products than the first cost of those products, a procedure which leaves a big margin of gain to arouse cupidity and strife. War in final analysis is but a struggle arising from conflicting commercial interests; attractive delivery charges being the unrighteous prize which arrays nation against nation in mortal conflict.

Obviously, the simplest way to abolish war would be, to remove the thing that causes war from the field of commerce, namely, attractive delivery charges. This objective could be reached by adopting a new and better method of performing commercial work, i. e., getting products from the producer to the consumer and furnishing this service on a cost basis like the mail delivery. With this aim in view, the United States could establish a scientific system of distribution by creating and operating a national clearing house for human wants and supplies which would carry all products from the point of production direct to the consumer and fix the charges just high enough to cover the actual cost of the service. In this way, the root cause of the war would be eradicated from the field of commerce.

The United States could take its place and do its share toward preserving world peace by inviting and urging other nations to organize and mobilize their delivery facilities in the same way. The final step in this program would be an international clearing house to provide a channel through which all products would flow from one country to another on a cost basis. With delivery charges fixed at cost throughout the world, the motive for war would be destroyed, the unrighteous prize which arrays nation against nation in mortal combat having been removed. Justice being established between nations in their economic relations with each other, permanent peace would ensue.

The United States should cut the appropriation for the war department in two and use half of the funds to found a peace department. The purpose of the peace department would be, to remove the cause of war from the field of commerce by establishing the postal market. The cost of one battleship, $28,000,000, would be enough to build and furnish a $1,000,000 postal market house in practically every city in the United States having a population over 200,000. The battleship soon becomes junk any way and is sunk as a target for newer types of vessels.

Professor Greene requests that those who approve of his plan will indicate it by letter or post card directed to him personally. He may be addressed as follows: Prof. R. L. Greene, Director, Department of Pharmacy, University of Notre Dame, Notre Dame, Ind.

Selfishness is that detestable vice which no one will forgive in others, and no one is without in himself.—Henry Ward Beecher.

"CAN THE POOR BOY SECURE A MEDICAL EDUCATION?"

The problem of medical education is one that has its constant difficulties and the working out of which does not seemingly result in a supply of medical service that is adequately distributed through the various districts of the country. It is especially notable that districts in which medical practice is but moderately or little remunerative, or in which it entails a great deal of hard work, are poorly supplied with physicians, while city districts and country districts with a wealthy clientele are reasonably crowded.

For the former, there might (under favorable conditions) grow up a generation of medical men who would be quite sufficient for all needs because they would have come from among the people themselves and would settle and practice among their own. Unfortunately, there are tremendous difficulties in the way of

gaining a medical education for the young man who has no financial backing and who is obliged to do outside work during the college year and during the summer vacation.

Various solutions have been offered, but, as far as we know, nothing that would work out in practice has been proposed. It has been suggested that practitioners of medicine might be licensed to practice after having passed three or four years of study successfully and before having obtained the doctor degree; that, then, further work and the gaining of academic degrees would depend on post-graduate study and advanced work. This plan is not without its advantages. In fact, this editorial writer believes that it might be developed in a highly acceptable manner.

However, it would be disastrous for the public welfare to let down the bars and to lessen the standard requirements both for those who desire to take up the study of medicine and for those who, after years of medical study, wish to submit to examination for licensure.

In calling the attention of our readers to an article on the subject appearing on p. 120 of this issue of CLINICAL MEDICINE, we once more submit the problem for discussion. We fear that Mr. Dillon, the medical student who wrote the article in question, has misunderstood the meaning that physicians in general attribute to the idea of "ethics." We can not understand how any medical practitioner could consider it unethical to aid deserving young men to gain a medical education. Surely, there must be a misunderstanding. The principles of the medical profession provide for a suitable continuation of its members. As the older practitioners die out, younger ones must take their places. To procure these younger ones can in no way be called unethical.

The subject is open for discussion.

The best evidence of merit is a cordial recognition of it whenever and wherever it may be found.—Bovee.

"A NEW DEPARTMENT"

In the January issue (p. 67), we published a letter from Dr. F. N. Richardson, of Cleveland, Ohio, who sugested the establishment of a department in CLINICAL MEDICINE conducted in the interest of the doctor's recreational hours. As Doctor Richardson elaborated his idea, we could not help but be infected by his enthusiasm and, in fact, exchanged a number of letters with him, receiving many valuable suggestions which we intend to outline in the following paragraphs.

It is easy to start a new department. It is less easy to keep it up and to maintain it acceptably, unless assurance is given that the idea takes with our subscribers, that it appeals to them and that they are willing to cooperate. So far, one very cordial approval and commendation of Doctor Richardson's suggestion has been received. For the rest, there has been a dead silence. If our subscribers are in favor of this particular department, let them indicate it, not necessarily by letter; a postcard will do. Only, we want to be sure that the new department is wanted and that it will be received with satisfaction.

To our way of thinking, there can be no doubt about the propriety of a department, in CLINICAL MEDICINE, devoted to the doctor's recreational interests. We have often said that we do not believe the scope of CLINICAL MEDICINE to be limited to strictly medical topics. We have declared it to be our ambition to provide for the doctor a medical journal and, at the same time, a magazine that contains reading matter on other topics than purely medical ones, but which, nevertheless, must interest him keenly. So then, we do not hesitate to consider Doctor Richardson's suggestion sympathetically and to declare our readiness to establish it.

Among other good things, Doctor Richardson mentions an article on the technical points to be observed in vacationing. This would, of course, have to be written by one who knows. Something on camp-cookery, ration schedule, per man, per day; type, quality and quantity of provisions needed for any given period, etc., would form one list of subjects to write up. The value of dehydrated foods would form another; and so one might go on. The point is this: The doctors enjoy outing trips and are frequently looking for good information on the subject.

Moreover (and this is important), patients are frequently interested likewise and they come to the doctor with their query: "Doctor, what would you advise?"

The doctor is also correlated with recreation not only for himself but even more for others. Suggestions along this line could be multiplied (this from another letter by Doctor Richardson):

"Take the country and small-town doctor for example: He is, frequently, the king-pin around which social pleasures revolve, at this time of the year, in small communities, where attempts at amateur theatricals are on the program, at the town hall or the Sunday-school rooms.

"The doctor is looked to to help make the thing a success. He takes part or his advice is asked as to how to run a 'show' or what to choose to present.

"A few stage hints, the question of 'make-up,' a list of suitable acts or sketches to select from could grace one or even two issues of CLINICAL MEDICINE at such a time of year as when such indoor social functions are the program of these small and even frequently the larger communities. As a matter of fact, within the past two months, I have been personally called upon, in my neighborhood church, to assist in putting on two operettas and one drama.

"The peculiar thing about this lies in the fact that I am known to be familiar with that kind of work. The point is, however: I realize how many a one may not be posted, yet, as *the doctor*, he is sought out to help make a 'go' of these social affairs."

After having received these valuable suggestions from Doctor Richardson, we asked him for a name for the new department, and this is what he said.

"Now, you ask me for suggestions as to a name for this new department. Four have occurred to me. Two are associated with the navy and ship usage.

"The significance of *'Shore Leave'* is self evident as a possible title.

"A custom, now obsolete aboard ship, was the hanging of a lighted lantern on the spar deck, when it was permissible for the men to relax from duties and enjoy leisure, smoking their pipes, etc. When the officer of the day ordered the lantern extinguished, all pipes were to go out also. This suggests, the *'Smoking Lamp'* as a name signifying recreation.

"Another, which I can hardly give full explanation to here would be: *'From Labor to Refreshments.'*

"All of us have not gone to the 'Little Red-Brick Schoolhouse on the hill, but we have been to school to say the least. With fond recollections, we have looked and listened eagerly for the *'Recess Bell.'*

"Surely, the readers of CLINICAL MEDICINE would like to hear the 'Recess Bell.'

"This last title seems the most feasible. It would seem to offer the greatest latitude to little allusions of all that is associated with play-time.

"So, in suggesting the title 'Recess Bell,' for the contemplated department of recreation; the whole question of boyhood and school days loomed before me.

"This has opened the way to an idea as to how to conduct the department, to a certain extent."

—

There are three questions before the house.

1.—Shall we have this new department?

2.—What shall be its scope?

3.—What shall be the name?

It would be encouraging if many of our subscribers would inform us of their opinion regarding this matter, if they would make suggestions and if those who have something to say in the form of articles would say it.

It's your move next.

If you want enemies, excel others; if you want friends, let others excel you.—Colton.

WOULD YOU KNOCK A FELLOW WHEN HE IS DOWN?

A few weeks ago, we received a letter from a valued correspondent and subscriber, in which the following passage occurred:

"Was surprised to find so much of CLINICAL MEDICINE taken up by the Huns. They exploited us enough before the War and we don't need any of their wisdom or dope."

In our reply, we pointed out the fact, that the war is over, and that the German scientists have added materially to the sum-total of human knowledge. The reply from our correspondent was: *A request to cancel his subscription.*

To our way of thinking, *science* should be accepted as international, as not being bound by nationalist limits. Science is not and should not be chauvinistic or jingoistic. German physicians and investigators are just as anxious to find means for the relief of suffering as are those of any other nationality. Their discoveries and results are, potentially, of as great service to physicians the world over as are those of others.

Let us see; the infectious nature of puerperal fever was first called attention to by a "Teutonic" physician. The bacillus of tuberculosis was discovered by a German physician; so was the bacillus of diphtheria and also the antitoxin that has deprived that disease of its horrors. Röntgen was a German, so was Liebig; so were many other scientists of note of whose discoveries we avail ourselves daily and in almost every phase of our lives. Even the electric street cars in which we ride down town and from town to town were first worked out in Germany. So much for the assertion that "we don't want any of their wisdom or dope."

Naturally, scientists in other countries have benefited the world in equal measure. But, that does not detract from the debt that the world owes to German science. We do not need to refer to German poets, litterateurs, musicians, artists, of whom there lived and worked a stately army.

Now, Germany is prostrate. Her physicians are subjected to deprivations and to financial stringencies (in common with most of their countrymen, especially those of the middle

class, including the professional classes) that can not be even imagined except by those who are in direct touch with them. We leave all other matters out of consideration and interest ourselves, just now, only with physicians. Deprived of their means of earning a livelihood, they are laboring under great difficulties. Still, they go on working with the scant facilities that are available. The scientific life in Germany, we are informed, is just as intense, just as active as it ever was. The discoveries that are being made are notable and will, one day, be recognized as highly important. Professing culture and the tolerance born of real civilization, shall we withhold encouragement to our Teutonic colleagues in their desperate attempts to progress and develop?

Recently, the *American Aid for German Medical Science* was inaugurated, the committee of which includes such notable American physicians as Lewellys Barker (Baltimore), C. C. Bass (New Orleans), F. G. Blake (New Haven, Conn.), Hugh Cabot (Ann Arbor, Mich.), Royal S. Copeland (New York), David Edsall (Boston), Alice Hamilton (Boston), James B. Herrick (Chicago), James W. Jobling (New York), Graham Lusk (New York), William H. Park (New York), Theobald Smith (Princeton), Rear Admiral E. R. Stitt (Washington, D. C.), Victor C. Vaughan (Ann Arbor, Mich.), William H. Welch (Baltimore), R. L. Wilbur (Palo Alto, Calif.), Arthur I. Kendall (Chicago), among many others.

This Committee collects funds to aid German medical sciences. "Apart from the purely humanitarian aspects" (the appeal for contributions states), "the international character of medical research makes it apparent that it is to the interest of science to extend such emergency assistance. . . . the German economic situation grows progressively worse and the position of the physican and the medical scientist is in many instances desperate. Constant politic upheavals merely accentuate the difficulties. . . . "

Shall American physicians pass by on the other side of the highway, thanking God that they are not as those others? Shall we kick those who are down and want a chance to rise and to work? Shall we condemn them for the wrongs committed by those in authority, in their country, years ago, and who helped to bring about the catastrophe of 1914-1918?

It is a characteristic of the Anglo-Saxon mind that it insists on fair play, on toleration, on giving a fellow a chance. Shall we as individuals be less inclined to lend a helping hand where it is needed, less willing to receive useful information where it is offered, less ready to reciprocate for advantages received than is, what we might designate as, the guiding spirit of our nation? Bigotry, intolerance, revenge, are not factors making for progress. Do not indulge in them. Let us, rather, be better than we believe those to be whom we accuse of having injured us.

Half the failures in life come from pulling one's horse when he is leaping.—Thomas Hood.

CREPITANT AND SUBCREPITANT RALES

In the discussion of his paper (p. 83 of this issue) Doctor Berghoff said that, on more than one occasion, he had been asked to differentiate between crepitant and subcrepitant rales and had refused to do so. Continuing, he remarked:

"Why so much fervor in attempting to classify and differentiate crepitant from subcrepitant rales?

"If, for example, crepitant rales were found only in pulmonary tuberculosis and were pathognomonic of that disease and if such subcrepitant rales were distinctive of bronchitis, bronchial asthma, bronchiectasis, etc., there would be some excuse for making a sharp distinction. But, we know that rales of any description have, *per se*, no specific diagnostic value.

"And again, if a sharp, clear-cut borderline existed between the socalled crepitant and subcrepitant rales, truly giving them a real definite clinical significance, it would be worth while. This, however, is not the case.

"There are many who permit themselves to be much perturbed because some of us fail to see the importance of a nice distinction of this subdivision of the moist rale, and they proclaim as follows:

" 'The subcrepitant rale has very definite distinguishing characteristics and should never be confused with the crepitant variety except by the most slovenly and careless.

" 'The subcrepitant rale', they tell us, 'is finer in texture, occurs at the end of inspiration and is nearer to the ear than the crepitant rale'."

To be able to sense a shading in the texture of a rale, is verily as difficult, even as impossible a task as is the splitting of a hair in its literal sense. As to the occurrence of subcrepitant rales at the end of the respiratory cycle as a distinctive feature—who can deny that their more obstreperous and more

coarsely-textured brother, the crepitant rale, almost constantly ignores this prerogative and slops over on the tail end of the inspiratory cycle himself.

"And, finally, we are told, the subcrepitant rale is nearer to the ear than his more matured relative. You will agree that a distinction of such relativeness is of no value whatever. So far as I am concerned, I ceased thinking of the subcrepitant rale years ago and finally arrived at the deplorable state of mind where I am entirely satisfied to be able to say to myself: 'The sounds you hear are moist rales arising within an alveolus and by their constancy and association with breath sound changes indicate trouble;—or again, the sounds you hear are dry rales, sibilant and sonorous, arising within a partially constricted bronchiole and portend no dire disaster.'"

Science is a good piece of furniture for a man to have in an upper chamber, provided he has common sense on the ground floor.—O. W. Holmes.

MEMPHIS MEDICAL JOURNAL

The Memphis Medical Journal, of which Number 1, Volume 1, has just made its appearance, is the official organ of the Memphis and Shelby County Medical Society. It is published at No. 24, Pathological Institute, University of Tennessee, Memphis, Tenn. The format is that of most state medical journals, the type is clear and clean, on good paper; the subject matter is promising.

While the sphere of influence is, very naturally, somewhat restricted, and while the new journal probably does not attempt to gain national subscriptions, we express our sincere wishes for its success in that field of work that the promoters of the journal have chosen.

THE CHEMICAL FOUNDATION SUIT

It will be remembered that, a year and a half ago, President Harding, on the advice of the Department of Justice, instructed the Alien Property Custodian to take steps to secure the return of all patents sold to the Chemical Foundation, Inc., which had been seized after the United States had entered the war in 1917. Some of these patents protected the manufacture of dye stuffs and of important medicinal agents for which, until then, we had depended upon German manufacturers. In the meanwhile, American preparations of these products had been made and perfected and, under the authority vested in the Chemical Foundation, Inc., several American firms had been licensed to manufacture the remedies in question, for instance, the arsphenamines. In consequence, physicians were able to select among different brands of arsphenamine instead of being limited to one proprietary "Salvarsan"—and at competitive prices.

From the *Journal A. M. A.* (Jan. 12, p. 130) we take the following:

"At that time" [That is, when President Harding had instructed the Alien Property Custodian to secure the return of the patents. —Ed.], The Journal had remarked editorially, "no fault can be found with the demand of the President for an investigation if he has evidence that indicates that the patents were sold at too low a figure. Certainly a clean cut investigation should be most welcome, particularly to the adherents of the Chemical Foundation. . . ."

The Journal then goes on to relate that, in due time, suit was instituted by the government in the United States District Court of Delaware; the decision of the court was handed down, January 3. In the decision, which is thorough and exhaustive, virtually every argument of the government seems to have been overthrown by the evidence of the defense. Of particular interest to physicians is the evidence concerning the nonworkable patent papers obtained by German firms as exemplified by salvarsan. Judge Morris quotes from the testimony of Dr. G. W. McCoy, director of the Hygienic Laboratory, given before a congressional committee:

I have talked of that matter with some of the most able chemists in the United States, and they all say that the description in the patent is so sketchy, and there is so much necessary that is omitted, that a well qualified chemist can not proceed and produce the material. He has to do a great deal of experimenting. I know one large, well-equipped manufacturing house commanding the best chemical talent money can secure, that spent about eighteen months before they turned out the first commercial batch of salvarsan.

Continuing, Judge Morris states that this view was established by evidence given before him in the Chemical Foundation suit; he concludes, therefore, that, because of the financial risks and hazards due to the obvious circumvention of our patent laws by the Germans, the certain affirmative value of the patents sold "was too slight and problematical to warrant the payment by American citizens of a sum even remotely approximating what they might have been worth to the German owners for monopolistic purposes." Judge Morris then ordered the bill of complaint filed by the government to be set aside. The Attorney-

General has signified his intention of having the decision reviewed by the United States Supreme Court; at any rate, the deductions of Judge Morris will be of considerable satisfaction to American chemists. Physicians are vitally interested in the maintenance of a domestic chemical industry in order that public health may be protected and foreign domination of our therapeutics (irrespective of the country of origin) may never return.

A fly is a very light burden; but if it were perpetually to return and settle on one's nose, it might weary us of our lives.—Frederika Bremer.

BISMUTH PREPARATIONS IN THE TREATMENT OF SYPHILIS

The article contributed by Doctor Sherwood-Dunn, of Nice, France, and appearing on p. 95 of this issue of CLINICAL MEDICINE, traces briefly the studies that have led to the employment of bismuth salts in the treatment of syphilis. A similar article appeared recently in the *Journal A. M. A.* (Aug. 25, 1923, p. 661).

In *The Journal* for January 19 (p. 209), there is an account of potassium bismuth tartrate-D. R. L., a basic potassium bismuth tartrate containing 64 to 69 percent of bismuth and which had just been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in "New and Non-Official Remedies."

Concerning the action and uses of this remedy, reference is made to the article appearing in *The Journal* for August 25, 1923. The subject is of such importance that we reproduce the report of the Council in the following. Referring to potassium bismuth tartrate-D. R. L., this report gives the following information:

Action and Uses.—See Bismuth Preparations in The Treatment of Syphilis (*J. A. M. A.*, Aug. 25, 1923, p. 661).

Dosage.—From 0.1 to 0.2 Gm. (1½ to 9 grains) by intramuscular injection, preferably into the gluteal muscle. The injections may be repeated at intervals of from four to seven days until a total of from 2.4 to 3.0 Gm. has been given.

Manufactured by The Abbott Laboratories, Chicago. No U. S. patent or trademark.

Ampules Potassium Bismuth tartrate with Butyn-D. R. L., 0.1 Gm: Each ampule contains potassium bismuth tartrate-D. R. L. 0.1 Gm. and butyn, 0.012 Gm. suspended in 2 Cc. of a fixed oil.

Ampules Potassium Bismuth Tartrate with Butyn-D. R. L., 0.2 Gm.: Each ampule contains potassium bismuth tartrate-D. R. L., 0.2 Gm. and butyn, 0.012 Gm. suspended in 2 Cc. of a fixed oil.

Potassium bismuth tartrate-Abbott is a finely granular, white powder; odorless, and having a sweetish taste; permanent in the air. It is soluble in water; insoluble in alcohol, ether or chloroform; soluble with decomposition in dilute mineral acids; almost completely soluble in solutions of the alkalies. Its solutions are decomposed by solutions of most alkaloids and local anesthetics. At 100 C. the salt loses a part of its water of hydration and on further heating it carbonizes and leaves a residue which contains potassium carbonate, metallic bismuth and bismuth oxide.

To about 2 Cc. of the aqueous solution (10 percent) add a few drops of copper sulphate solution. A blue precipitate is formed which is soluble in potassium hydroxide solution. On standing, the alkaline solution gradually deposits a precipitate. To about 5 Cc. of the aqueous solution (10 percent) add a small crystal of potassium dichromate; a yellow precipitate forms which is not soluble in potassium hydroxide solution. To about 5 Cc. of the aqueous solution (10 percent) add a few drops of silver nitrate solution. A white precipitate results. On boiling, the mixture blackens and a mirror forms. The aqueous solution (10 percent) gives white precipitates each with barium chloride solution and with sodium hydrosulphite solution.

Boil about 1 Gm. of potassium bismuth tartrate-D. R. L., accurately weighed, with 20 Cc. of alcohol for 15 minutes, filter, evaporate the filtrate in a weighed dish, cool and weigh the residue, if any. The soluble matter should not amount to more than 0.5 percent. To about 0.2 Gm. of potassium bismuth tartrate-D. R. L., accurately weighed, and 2 Gm. of potassium permanganate, add 5 Cc. of 10 percent sulphuric acid, allow the mixture to react for 15 minutes and then thoroughly mix with 15 Cc. of concentrated sulphuric acid. Decolorize the resulting mixture with hydrogen peroxide solution, dilute it with 35 Cc. of water, boil the solution for 5 minutes and finally dilute it with 150 Cc. of water. Saturate the liquid with hydrogen sulphide, collect the precipitate in a weighed Gooch crucible, wash it successively with hydrogen sulphide water, distilled water, methyl alcohol, carbon disulphide, methyl alcohol (again) and ether, dry at 110 C. and weigh. The weight of bismuth sulphide obtained corresponds to from 64 to 69 percent of bismuth.

Leading Articles

The Early Diagnosis of Active Pulmonary Tuberculosis*

By ROBERT S. BERGHOFF, M. D., F. A. C. P., Chicago, Illinois
Assistant Prof. of Medicine, Loyola University School of Medicine

NO apology is deemed necessary for the presentation of a subject, both elementary and trite. This in spite of the fact that no promise or attempt is made to suggest anything new in the nature of theory or practice. The intention is merely to provide a résumé of the subject with the hope that the discussion may throw some light on the very common vacillations, errors and procrastinations in early diagnosis.

There is probably no disease of comparable universatility and importance, which is attended with so great a percentage of error in diagnosis on the part of the rank and file of the profession, as is tuberculosis. Strangely enough, this error consists not only in the failure to detect the disease in its incipiency, but quite as frequently in the reverse, the diagnosis being made of tuberculosis in entirely innocent subjects. The explanation of this uncertainty in diagnosis lies not so much in the lack of technical training of the physician as in his failure to appreciate a few basic but essential facts relative to the nature of this infection.

The diagnosis of early, active, pulmonary tuberculosis, while neither simple nor elementary, is possible to anyone and with reasonable surety. However, since the disease is insidious in its onset and accompanied in its earliest stages with meager and non-specific symptomatology and physical findings, it calls for a most careful and painstaking examination of the patient, plus a nice and logical discrimination of the symptoms. It demands appreciation of the fact that this disease, like typhoid fever, diphtheria, syphilis, etc. ad infinitum, is constitutional; that, in consequence, its earliest manifestations need not be expressed through the medium of local signs. Failure to accept this fact leads to procrastination in diagnosis, which in turn results in the advancement of an incipient case into one more matured. Furthermore, early diagnosis presupposes, on the part of the examiner, a thorough understanding of this disease in its entirety. Knowledge of the most common early symptom complex, plus the concomitant physical expressions, is not sufficient. Appreciation of the cause of the disease, its mechanism, its *modus operandi* is essential. Realization of the difference between tuberculous infection and clinical pulmonary tuberculosis is necessary. All of which preamble leads us to a consideration of the etiology of adult pulmonary tuberculosis.

The Bacterial Cause of Tuberculosis

Koch's revolutionizing discovery, in 1882, was responsible for two diametrically opposite end-results. The big prime effect, of course, was a penetrating ray of light into and through a previous gloom and darkness. A ray of light, a beacon, which led the millions of befuddled and weary gropers out of the valley of obscurity. It put an end to fanaticisms, imageries and wild concepts. It firmly and incontestibly established what, through the centuries, our professional ancestry through long lives had conjectured about and, on departing, had left as an unsolved heritage to posterity.

I wonder, though, whether this discovery of Koch was not also responsible, partially, at least, for the period of complacency, the sense of having solved entirely a vexing problem, which seemed to have settled down on thinking men like a pall, and showed no signs of lifting until a decade ago? For twenty years, the general medical profession and the phthisiologists took up every phase of the disease except the one which had been merely opened to them through Koch's discovery. It is difficult and perplexing to understand why this should have been so. The logical sequence should have carried them from cause to mechanism,

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from mechanism to the method of infection. It is true, the factors predisposing towards pulmonary tuberculosis called for and received a wealth of attention and vigorous analytical study; yet, the method of origin was allowed to remain dormant for years. Sporadically, a feeble flicker in the guise of a well constructed theory broke through the haze, but, appearing in the wake of the full glow of Koch's discovery, it flickered merely, drawing no attention, and as feebly died away. So, then, it remained for the past decade to establish a theory at first much contended, at present staunchly and universally accepted, namely, the theory of childhood infection.

Tuberculosis the Result of Childhood Infection

That infants and children are subject to tuberculosis in its various guises, was first admitted. It required years to further extend this fact, and to arrive at the realization of the great frequency of this disease in the juvenile years. That tuberculosis in children could be, and is, the open sesame, the entering wedge for the dire scourge of adult life, was not freely considered until quite recently. The ultimate climax, that all pulmonary tuberculosis has its inception in infancy and childhood as a glandular infection, and that the adult manifestation is but a metastatic expression of an infection incurred in the earliest years of life, is not common knowledge even today.

It is my belief that failure on the part of the rank and file of the medical profession to assimilate this fact plays an important part in their confusion in diagnosis. A mere casual consideration fails to impress one with the importance of the proper conception of the mechanism of tuberculosis, but, on careful reflection, it soon becomes apparent. Knowledge, that the adult-lung involvement has its origin from a juvenile glandular infection, and that the former is but a metastasis of the latter, is a forceful diagnostic factor and enters into every phase of a careful examination. Its unqualified acceptance influences the art of history taking, it leads to a nice discrimination of symptoms, and to a proper logical estimation of the value of physical signs.

History Taking

The careless, incomplete case histories, routinely elicited by many, have ever been a source of wonderment to me. Confronted with the vexing problem of detecting an insidious disease in its infancy, they unwittingly spurn a material aid, proffered them gratuitously, as it were, and demanding no special effort. Surely, a kaleidoscopic mental picture of the infancy and childhood and environment of the patient, unfolding reel by reel and carrying on through adolescence to adult life, is of consequence and should be utilized diagnostically. That the patient's mother was actively tuberculous during his infancy, and thereby of a certainty guaranteed him a massive infection, is of utmost importance in a history elicited twenty or forty years later. That the patient during his childhood was puny and sickly, or perhaps had a "chronic running sore in his neck," is not negligible information. The story of an unresolved long-drawn-out pneumonia in childhood, which culminated in his being sent to the country for a year, is of consequence. And so on, ad infinitum.

And what of the personal history, that confiding story whereby the patient lays bare his habits, daily routine, his faults and transgressions? Are we to profit nothing from the recitation? If the past or childhood history of the patient is of importance in proving the presence or absence of a virulent childhood infection, of how much greater value is the story dealing with the factor or factors that are responsible for the transference of this infection from the glandular to the pulmonary system! Who will belittle the importance or the necessity of a most careful and thorough search for the predisposing agent or agents which, by lowering individual immunity, are the direct cause of the instigation of the early lung lesion?

The help obtained from a personal history depends in a full measure on our thoroughness in eliciting details. Just as heredity, *per se*, has lost its ominousness, so have we changed our views on other agents, erstwhile looked upon with suspicion. Circumstances, but a brief while back in the foremost ranks of predisposing factors, have proven myths or at least been mitigated. Texts not so obsolete but that they still lay claim to space on our shelves enumerate in detail "Hazardous Occupations." Changing times and humane legislation have stricken them out.

The universal belief, two short decades ago, that a brief contact with a frank consumptive, in adult life, was more than incriminating, and that gave such an admission first place in a personal history, has now been relegated to the rear. The story of a measles infection in adult life, up to five years ago overshadowed what we now appreciate to be a much more practical danger—influenza. But pleurisies, plastic and with effusion, always looked upon with suspicion, have assumed tremendous signifi-

cance in the personal history, so that, today, they are practically synonymous with tuberculosis.

Ambiguous information of blood-spitting volunteered by the patient assumes diagnostic positiveness when qualified with amount and respiratory expulsion. Drug addiction, a menace of our times, and the consumption of questionable liquors and unmellowed spirits, by our unfledged growing youth, in bravado resentment of experimental legislation, are new predisposing factors which, in my opinion, crowd out all but the most important.

Activating Factors; Some Predisposing

Fatigue:—Just as rest is probably immunity's greatest synergist, so is its antithisis, fatigue, in my opinion, a very much underestimated element in producing activation or disease. In truth, I should accord it a place of much prominence among the predisposing factors. Fatigue must be accepted in its broadest sense, as embracing both, physical and mental, weariness.

Physical Fatigue:—While it is unquestionably true, that this condition may be occasioned by a variety of circumstances, four elements stand forth as frequent offenders. These are, sleep, chronic foci of infection, faulty ventilation, lack of muscular exercise.

1.—Sleep. The amount of sleep required varies so widely with the individual, and is influenced to so great an extent by age, occupation, habit, etc., that it is difficult to determine the essential requirement; nevertheless, a protracted and marked deficiency of sleep soon leaves its imprint. In addition to the amount of sleep obtained, the element of regularity must be considered. We are all convinced, either from personal experience or from observation, of the devitalizing effect of frequent irregularity in hours devoted to sleep, and we have been impressed with the fact that ten hours of sleep in one night will not compensate for the curtailment to four or five hours on the night preceding. There is no such thing as "catching up on sleep."

2. Chronic foci of infection, through the prolonged and constant surcharging of the blood-stream with foreign elements, occasion fatigue.

3. Faulty ventilation at home, at work, or at play, is an undermining factor of consequence.

4. Lack of muscular exercise, especially in individuals of a sedentary nature, unquestionably leads in time to a physical weariness.

Mental Fatigue:—Worry and fear not only lead to apathy towards work and recreation, with the resultant loss of ambition and listlessness, but, when prolonged, invariably bring on fatigue. The passions, jealousy and hate, while fortunately as a rule intense but brief, occasionally go on interminably, and, when drawn out over a considerable time, must be considered as a source of mental fatigue.

Libido:—It has never been clear to me why so little or no attention has been directed to this not infrequent state of mind, encountered amongst adolescent youths, at the age from which pulmonary tuberculosis draws most of its recruits, and why this condition should not be listed among the predisposing factors. The term libido, like fatigue, is used in its broadest sense. It refers not alone to excessive venery, nor does it stop with masturbation. It includes and applies to particularly that group, that through the influence of endocrine dyscrasia, mental taint, or heredity, are sex-engrossed. The individual who is constantly under mental sexual excitement, with a resultant impairment of sound sleep, appetite, etc., who very rarely enjoys complete relaxation, whether at work or at play, consistently develops signs of mental fatigue.

And, so, with our newer conception of the mechanism of pulmonary tuberculosis, the many and ever-varied predisposing factors take on additional significance, and render careful and conscientious history taking indispensable in diagnosis.

Symptoms and Their Significance

To many, the lack of specificity and the apparent irrelevancy of complaints in the early tuberculous are discouraging. It is probably true that no disease, not even excepting syphilis, is accompanied with so vague an anamnesis. Yet, there are some signs which assume definite importance because of their constancy. It would be idle to attempt to enumerate all or even the majority of possible early symptoms. The following are suggested because of their frequency:

1.—*Local:* Bloody expectoration, varying from blood-tinged sputum to frank hemorrhage.

Pectoral pain, most commonly a dull, gnawing sensation, aggravated by deep inspiration, located at the third or fourth interspaces; or a real aching between the shoulder blades.

Shortness of breath, not a true dyspnea, rather of the nature of a "Catching of the Breath."

2.—*General:* A sense of fatigue or lassitude without exertion, a wearing out early in the day. The complaint of irritability with accompanying loss of ambition and apathy

for former interests. An insidious and progressive loss of weight, unaccountable through changes of habit, appetite, etc. Sensation of chilliness and depression in the forenoon, giving way to warmth and flushing in the afternoon. An occasional general body sweat at night with an aftermath of weakness. Temperature variations from subnormal in the morning, a gradual elevation in the afternoon, to a fastigium at three or four P. M., and a gradual descent in the evening.

While freely admitting the lack of specificity of any one particular symptom, whether local or general, the combination of one or more into a complex of considerable value is frequently encountered. Thus, a productive cough plus a sense of fatigue and lassitude, accompanied with a progressive loss of weight, is a common combination of tremendous diagnostic importance. The ambiguous and inconsequential story of a vague pectoral aching arouses keen suspicion when linked with the history of chilliness in the forenoon, being superseded by a temperature in the afternoon. The record of a daily afternoon temperature assumes added significance when accompanied by a corresponding acceleration of pulse and respiration. It becomes apparent therefore that, while the early symptoms of pulmonary tuberculosis lack specificity, this handicap in diagnosis is overcome in a measure by assiduous scrutiny and logical correlation.

Physical Signs

The fact that a certain percentage of early active pulmonary tuberculosis will have to be diagnosed without characteristic physical findings, in no way belittles the value of a careful examination. Furthermore, while we look for and suspect the earliest local manifestations in one of three areas, the entire chest must be gone over most carefully. If the apices, the most frequent site of infection, are not illuminating, we focus our attention on the hilus. It must be remembered that the peribronchial glands are both, the atria of the juvenile process and the scavenger deposits, harboring the organisms and toxins, and that an extension from the hilus is neither logical nor uncommon. In the presence of both, a negative apex and hilus, it is frequently possible to elicit the sought-for evidence in the interscapular area. However, to avoid failure in locating the earliest signs, one must explore every available inch of lung area.

To enumerate the physical signs of any value in early tuberculosis, is not difficult, since their number is small; but, to attempt to classify them in their order of merit, is quite another matter, and admits of a difference of opinion. An index of the most constant and characteristic signs must include: lagging on inspiration, increased density on palpation, muscle rigidity (spasm), respiratory changes, i. e., alteration in rhythm and change in pitch, rales. The more or less superficial character of a paper of this type prevents entering into a detailed discussion of the methods of elicitation and the diagnostic value of each individual sign. It would seem proper however to stress the more important.

Respiratory changes:—The novice, the general practitioner, and the tuberculosis specialist, all encounter their greatest difficulty in the detection and proper estimation of these vague respiratory abnormalities; and, yet, in my opinion, they form the earliest concrete physical evidence of the presence of the disease. It is true, they lack the form and specificity of the rale, but they antedate the arrival of the rale in a vast number of cases. Fortunately, from a diagnostic standpoint, early pulmonary tuberculosis is practically synonymous with an apical lesion, for a hilus lesion renders these early changes still more vague.

Rough breathing is probably the most frequent accompaniment of early infiltration of the apex and has very considerable significance. When pronounced, it is detected without great difficulty.

Interrupted or impeded breathing, most typically encountered in lesions involving the upper third of the upper lobes exclusive of the apex, is a fairly constant finding.

Harsh, high-pitched breathing, and prolongation of the expiratory sound, are frequent and early findings. However, as Pottenger ("Clinical Tuberculosis"—Vol. 1, p. 430) aptly remarks, they probably speak for the relighting of an old focus of sufficient extent to have left a fibrosis, rather than a new and virgin infiltration.

Of the three respiratory changes in question, rough breathing (in my opinion) is of paramount importance, both from the standpoint of early occurrence and of diagnostic significance. I believe, the diagnosis of an active lung lesion based on the presence of this one lone physical expression, if accompanied with clinical symptomatology, is justified.

Rales:—As previously suggested, these adventitious sounds, when properly modified, are practically synonymous with pulmonary tuberculosis. There is a question in my mind, however, as to their merit in a discussion of the earliest stage of the disease. The typical crescentic shower following an expulsive

cough, beginning early in inspiration and occupying the entire inspiratory cycle, suggests a frank, well instituted process. Their diagnostic import is unquestionable. It is true, an occasional diffuse bronchial inflammation involving the finer terminals, and the post-influenzal respiratory infections, yield this same picture. Both conditions, however, with the aid of a history and a study of clinical symptomatology can be differentiated with brief observation. (See page 80.)

The X-Ray

In the matter of the value of the x-ray as a diagnostic adjunct in very early active pulmonary tuberculosis, we again encounter a wide variance of opinion. Volumes have been written in exaggerated eulogy on the one hand, and unmerited depreciation on the other. To arrive at a happy medium, is not a simple matter. Nor is an opinion based on individual results convincing. There can be no question, of course, even in the minds of the most skeptical, of the very valuable information elicited through this means in an appreciable number of early cases. The argument simply concerns itself with the percentage of instances in which it fails to be of service. It is this very inconstancy and vacillation of individual results which accounts for the extremes of optimism and pessimism in the minds of the profession.

In my own personal experience, I have found the x-ray of both, frequent and material aid. In the obscure hilus type with no definite physical findings, the x-ray has been invaluable. In apical lesions, my observation has been as follows: Practically all cases which have arrived at the stage admitting of rales registered definitely x-ray evidence. Apical lesions in the pre-rale stage, with physical findings limited to the barest respiratory changes, furnished unsatisfactory and unreliable help in the majority of instances. I can, without difficulty, however, recall several instances in which a diagnosis was not even suggested by the physical evidence and, yet, was definitely established by means of a careful Roentgen-ray examination. From the differentiation by means of the x-ray of a quiescent or healed from an active focus, I have seen only mediocre results.

The Tuberculins

The entire subject of diagnostic tuberculins is less than two decades old. How stormy and checkered has been their career! With all their buffeting, they have not settled to a calm, even today. Divergent and vacillating opinion seems as marked as ever. At first, the rather severe reactions, general as well as local, which accompanied their administration, served to make them unpopular. With this objection eliminated or at least mitigated, they again came into favor with the profession, but only for a short time. A few years later, a very interesting misinterpretation of compiled statistics brought them into disrepute. It happened in this wise: The von Pirquet test, run on a large series of juveniles, registered an overwhelming percentage of positive reactions. Since practically all children at the age of fifteen years have been tuberculously infected, this result was logical. It served, however, to discredit the specificity and, hence, the value of the test. And, so, we find that, from the time of introduction to the present, there has been a hesitancy and doubt as to the diagnostic value of tuberculin. With the advent, during the past few years, of a great volume of interesting data concerning the non-specificity of proteins, the problem is more muddled than ever. True, the work done along these lines thus far has been largely a matter affecting therapy; yet, inversely, it challenges the specificity of these tests. Schmidt & Kraus e.g., report remarkable results with milk injections in early tuberculosis.

Opinion may vary widely as to the diagnostic value of tuberculins. Yet, I think it is universally agreed that they occupy a very definite place. While a positive tuberculin reaction in an adult signifies that the individual has been at some time or other infected, it does not stop with that rather meager information. The degree or intensity of the reaction helps to clarify a doubtful situation. A severe positive result points with suspicion to a definite cell sensitization, which, in turn, augurs a recent activation. A weak or indefinite reaction speaks for an invasion that has long since capitulated to an immunizing force.

The Sputum

It is unnecessary to plead for oft-repeated examinations of the sputum. It is common knowledge that, in the utter absence of physical signs, in a case suspicious merely because of symptomatology, a conscientious search of the sputum often affords a positive diagnosis.

My conclusion is merely a repetition of the introductory statement; that probably no disease is attended with so great a percentage of error in diagnosis as is early pulmonary tuberculosis. The explanation lies not so much in the lack of technical training on the part of physicians, as in the failure to conduct a painstaking examination, which is possible only with a thorough understanding of the disease.

Treatment of Pulmonary Tuberculosis

By WALTER B. METCALF, M.D., Chicago, Illinois

THE treatment of tuberculosis is the most complex undertaking in the practice of medicine. It not only includes the multiple vagaries of the disease, but requires the best selection from the most formidable array of methods, agencies and remedies found in any field of medicine. It would be easier to enumerate the things that have not been tried than to mention the ones that have been recommended. Yet, we dare not stop trying to find a better treatment. Speed the day when an immunizing agent is discovered.

There are three important things to be considered in the treatment of tuberculosis. They are, the time, the place and the remedy. These form the great trial in our struggle against this, the most aggressive and insidious enemy that attacks mankind. There is no disease that the physician is called upon to treat which requires so much resource and ingenuity as tuberculosis. In undertaking to treat a case, he assumes the responsibility of generaling one of the greatest of fights, the waging a battle of life for a life against an enemy whose history of carnage is awful. He who takes upon himself this responsibility must needs have a great deal of fortitude.

The physician who is successful in the treatment must know human nature with all its variations. He needs to be an optimist of the first water.

The treatment is long and tedious and requires proper supervision.

Relapses are liable to occur, the patient must be advised of this and must cooperate in his treatment. He must be in sympathy with his regulations; therefore, must be told of the value and advantage of the rules and regulations.

The stage of the disease influences the nature of the treatment.

The treatment is an individual matter for the physician. He uses the methods, agencies and remedies that have served him best. The writer, for that reason, will refer only in a general way to methods and remedies that he has found the more valuable in discussing the subject. It is not the plan in this outline to give the minute details with the needed variations from day to day or as complications occur. It also is an individual matter with each patient and is subject to frequent change. The physician must be alert and ready to take advantage of every opportunity to move forward.

The Time

Time is a most important factor in the treatment of tuberculous disease. This statement is supported by the following facts:

First, the great prevalence of the disease.

The average tuberculosis mortality from the registration area of the United States shows a rate of little more than 100 deaths per one hundred thousand population.

Tuberculous infection occurs in ninety-five percent of our people by the time they reach adult life; probably 10 to 15 percent of these develop the disease at some time during their life. This would indicate that between 10 and 15 percent of our people are the victims of manifest tuberculous disease. It is our work to discover it early.

Second, if the applied treatment is of value, its efficiency is in direct ratio with the early stages of the disease.

Tuberculous disease begins so insidiously that the process of destruction may be going on for months or years without our knowledge, and its discovery may be accidental. Tuberculous disease is frequently covered or masked by some other malady, the signs and symptoms of which point to or tend to indicate some other infection, and the true nature of the infection is overlooked. We find tuberculous disease masquerading under the guise of frequent colds, bronchitis, influenza, asthma, malnutrition, digestive disorders, phobias, neurasthenia, or some other conditions the symptoms of which are more illuminating.

Sweany reports three cases of tuberculosis, in which the concomitant diseases caused the dominant symptoms, and the tuberculosis played a minor role, far less so than surface appearances would indicate. These cases illustrate the importance and frequency of associated conditions in tuberculosis.

The unskilled, the careless or the lazy physician sees only the illuminating or easily recognized and interpreted symptoms and things, and overlooks or neglects or fails to find the real cause for these symptoms and signs.

A disease that kills one out of every seven of his patients should not be the last one looked for in his attempt to make a correct diagnosis and properly prescribe for his patients. The possibility of tuberculous disease

should be uppermost in his mind when making an examination, and I feel sure that this is the practice of every physician specializing in tuberculosis. It should be the motto of every general practicing physician, for he is the one, usually, who is the first to see those who are known to be ill, as well as to have a frequent opportunity to observe other members of the family who may not know that they are ill. The family physician holds the high position of guardian of their health.

The time was when we said, "the examination of the sputum will settle the question". As we know tuberculous disease today, it does not always settle the question. The physical signs which we feel and hear, have, up to the present time, constituted the essential basis of all systems in the diagnosis of pulmonary tuberculosis. But, mere degrees in variation of vocal fremitus and resonance, in the changes of the percussion note, in the altered breath sounds, in the varying character of the adventitious sounds, signify much or little, according to the skill with which we can translate the language of physical signs into the objective conditions in the underlying tissues themselves. Physical signs which we feel and hear are often hard to interpret and leave plenty of scope for erroneous conjecture.

In an effort to make an early diagnosis, we must advance another step if we are to take the best possible advantage of time as a factor in the treatment of tuberculosis. We may do this if we will give careful consideration to the evidence secured by symptoms as elicited by experienced history taking. If the symptoms thus elicited are given the value they deserve, they can be relied upon as an early evidence of tuberculous disease.

A physician can detect enough evidence from the history upon which to make a diagnosis of tuberculous disease, if he possesses an average amount of skill, and if he will be careful, not careless; diligent, not lazy. How often does he take a careful history and make a chest examination of patients who consult him about a cold?

Has he the right, because of his lack of skill or through carelessness or laziness, to allow the time for his patients' recovery to go by? In other words, he is often to blame for his patients' lost opportunity to get well. This is little short of criminal.

The Place

It may be the home, many times it *must* be the home and in a certain percent of cases this is by far the best place. It has been suggested that, as soon as a diagnosis of pulmonary tuberculosis has been made, the patient be taken away from the climate in which the disease developed. This suggestion does not seem reasonable in view of the fact that climate is not implicated as a causative factor in the etiology. The advantages of a change of climate or of a sanatorium are often offset by the depression that comes from homesickness or from being constantly with those who are sick. In and about the home are many comforts and things to occupy the attention, that are not at all detrimental, and they serve to keep the mind from becoming self-centered, and thus make for recovery.

On the other hand, the educational value that comes from a residence in a sanatorium is, of course, of great benefit. If we could send the majority there, it would be ideal. But, we cannot. If we could send them there for even a few months, much good would be done along the line of protecting the "innocent bystander" and help in constructing a good foundation upon which to rebuild. One objection to sanatorium treatment is, that the further treatment is often neglected when they return home. The gap between sanatorium treatment and re-occupation often leads to relapse. With home treatment, the average duration of treatment is longer and there are fewer relapses. The very ill should be treated in a sanatorium if the best results are to be obtained. A change of climate is, in my opinion, of the least value, and should not be considered, except in a very few exceptional cases. According to Liebesny, the capillary circulation becomes slower at high altitudes. The selection of a climate requires individualization. In the advanced stages, especially those with cavities, high altitudes seem to aid in their evacuation and thus lessen the amount of absorption. It is no longer necessary to defend the fact that pulmonary tuberculosis can be successfully treated in any climate and that good results are not dependent upon ideal climatic conditions so much as upon skilled medical supervision.

Certain types of cases have a better prognosis at low altitudes. If the climate plays a part in the treatment of tuberculosis, the home climate is by far the most valuable, all things being considered.

The Remedy

We have no specific for the treatment of tuberculosis. The treatment is best summed up under the term "general treatment". This includes protection from all injurious factors, systematic increase of the depleted forces and stimulation of energetic resistance, plus a well

considered stimulation therapy.

1.—Injurious Factors

Elements of fatigue are a causative factor and form one of the classic symptoms of tuberculous disease. The first requisite of the physician is, to determine what factors have lowered, or are continuing to lower, the resistance of each individual patient. This implies great demands on his training, experience, and resourcefulness and an infinite attention to details.

Great care is required to avoid massive reinfection—failure to do this is one of the very common causes for the chronicity to the disease. All other foci of infection must be removed if possible. Impaired nutrition and lowered resistance, incident to intercurrent disease, seem to be the most potent factors in activating such infections and causing tuberculous disease.

2.—Systematic Increase of the Depleted Forces

1.—*Rational Feeding:* All individuals thrive best on a mixed diet. The food should be nutritious and energy producing and rather rich in fats. The amount of food given will depend upon the requirements of the individual patient, but there should be a correct balance. The tuberculous individual often shows a marked aversion for certain foods. The gastrointestinal tract must be kept in good condition. This is best done by careful regulation of the quantity and variety of food, with strict enforcement of proper intervals between feedings.

There are good reasons for an alkaline treatment in tuberculosis, and this can be largely accomplished through the dietary.

Frequent examination of the urine is urged. If there is an excess of indican and a high degree of acidity, the digestive organs are being overtaxed.

2.—*Open Air:* Air is the most important substance in the conservation of life. The consumptive needs air most, and all that he can get. But he should not be made to suffer while getting it, nor should he be exposed to extremes that are so severe as to take away all of his powers for recuperation in keeping his body warm.

3.—*Rest and Exercise in Proper Graduation:* Rest is a fundamental principle in the treatment of tuberculosis. It includes rest of body and mind. Rest of the body slows respiration and circulation and relieves fatigue when due to physical effort. Advanced cases should be kept in bed until activity has ceased, when brief sitting-up periods may be followed by regular walks, then systematic exercise. These exercises should be so arranged as to aid pulmonary ventilation. If fatigue is due to fear or worry, limited occupation would correct and produce mental rest. Care should be taken to consult the needs and tastes of the patient. Where convalescence is more rapid, exercise is desirable as soon as the patient feels able to take it.

Stimulating Therapy

Pulmonary tuberculosis, as presented for treatment, usually represents a mixed type of infection and our treatment must be varied.

A true specific against tuberculosis can effect a cure only in the incipient cases, those without mixed infection. As far as possible, symptoms should be controlled by management rather than by medication.

It is the writer's belief that patients who have had general treatment plus tuberculin have fewer relapses and live longer than do those who have received general treatment as ordinarily prescribed.

A great deal has been said and written derogatory to the tuberculins, because non-specific proteins may give the same irritation reaction. It is the writer's belief that this does not prove that the tuberculins have no specific action; because, if you inject a non-specific protein or other irritant, you may have a local or irritation reaction, and possibly a simulating constitutional reaction, but you do not have the focal reaction.

In the tuberculins, we have exhibited the highest degree of specificity. In fact, we have no other agent as classic as the tuberculins. With them, you can produce a definite focal reaction. This cannot be done with the proteins or any other agent.

Tuberculin may be said to possess specific relationship to the tuberculous. An individual free of tuberculous infection can tolerate large doses without reaction symptoms. The individual who is tuberculized yields a response, both local and systemic.

The selective effectiveness of tuberculin, when properly administered, cannot be equalled as a therapeutic agent in carrying on an effective stimulating treatment.

Many different methods of administration have been advocated. The writer has, for more than twenty-five years, used the subcutaneous, always using Koch's old tuberculin. During the past year, he has used powdered tuberculin B. E. by nasal insufflation, as advocated by Paget, with favorable results.

Paget's belief is, that certain parts of the nasal epithelium can disintegrate tubercle

bacilli and elaborate specific antibodies.

Israel claims that tuberculin, if properly administered, will do fifty percent more good than any other known substance in the treatment of tuberculosis.

Therapeutically, tuberculin is a remedy with which great good can be done—and great harm also. But, is this not true of nearly every remedy if not used with a proper understanding of its action and limitations? This knowledge of the use of tuberculin is within easy reach of every physician and, with increased experience, it is, of course, possible to increase the good results.

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Institutional Care of Tuberculous Children

By ALFRED T. DAVIS, Chicago, Illinois

THIS article will be limited to the sanatorium care of children suffering from tuberculous infection of glands, and those suffering from malnutrition and inanition. It will not be necessary to include pulmonary tuberculosis of childhood, as such children require the same treatment as adults, as well as the same care in isolation from other children while the disease is active. Surgical tuberculosis, bone and joint tuberculosis, and tuberculides, all require hospital treatment until the disease is arrested.

Unfortunately, there are many children who need traininig and care such as is given in a Municipal, County or State tuberculosis sanatorium. Such children are selected from the public schools and are examined by physicians competent to make a correct diagnosis in this class of cases and to select those entitled to treatment from a physical standpoint. Generally speaking, these children are found to be pale, anemic, greatly underweight—often as much as thirty to forty pounds—more or less peevish and irritable, listless and apathetic. Or the listlessness may be replaced by a nervousness which seems to prevent the child from being still for two consecutive minutes. The appetite is almost always at fault from coddling and indulgence at home with a surfeit of sweets, together with a certain dysfunction of the digestive and ductless glands. Add to this enlarged axillary and inguinal glands, and the more common "rice-kernel" glands of the cervical region; and this will give a fairly complete description together with the stooped shoulders and slouching posture due to general weakness. This type of child is so common that no physician who has any practice among children can fail to recognize the picture at a glance.

On admission to a sanatorium, the psychological reaction of the child depends, to a great extent, upon its previous training and environment. Those from a large family, where they are taught to obey orders and not to question authority, usually get along with a minimum amount of nostalgia; while, on the other hand, the spoiled, pampered child is at a great disadvantage on account of having no one to make a fuss over it and, for that reason, is much more homesick. This feeling of homesickness is increased to a great extent on visiting days, when the relatives come to visit the child. At such times, it is often more difficult to convince the parent that the child should stay than to convince the child itself. Children, however, seldom miss their meals after visitors leave, in spite of the fuss they make about returning home.

After the first week, the children settle down, routine fills the greater part of their waking hours, friendships are formed with the other children, all of which fills the child's mind with thoughts other than those of home. The older ones are detailed to look after the younger ones in a certain sense; that is, they see that they have clean hands and faces at meal time, and, in a general way, see that the small ones are not imposed upon by the larger ones. They also keep the physician posted if the little ones complain of pains or sickness, which is more readily spoken of to an older child than to the physician.

After a short residence in the institution, the child's mental attitude begins to change. There is less tendency to mope or to take an attitude of self pity. This is usually cut short by the fact that the other children have little time for a "kill-joy", which results in a necessity to do one of two things:—either join with the

others in games or do the moping in solitude. There is no better example than childhood to illustrate the old saying:—"Laugh and the world laughs with you, weep and you weep alone." The child soon begins to keep the parents posted as to what is being done, and what it hopes to accomplish. In this way, the physician seldom fails to secure the earnest cooperation of the parents.

Obedience to Rules. Need of Discipline

There is, however, one phase that always causes the physician considerable amusement, and that is, to request the parent to talk to the child about some particular phase of the cure in which there is lack of cooperation on the part of the child, but to which the parent invariably replies: "Now, Doctor, if my child does not do as you tell her to, you give her a good whipping for me." This is, of course, one thing that cannot be done, but the effect on the child is often salutary. One little patient was so obstreperous that we had the parents sign a statement to the effect that the child might be punished. The fact that we had the signed statement was sufficient to bring about good behavior.

It is self evident that no institution can be satisfactorily run without a set of rules or a code that will favor the ends that they are seeking to attain; hence, the need of fairly strict discipline. Among children, it is perhaps the more easily maintained than among adults. The best reason for this is, that all children are obeying the same rules, as, for instance, when everybody goes to bed at eight o'clock, it is not the hardship for the many that it is at home when everybody stayed up and only Mary had to go to bed. The enforcement of the bed-time hour and the daily rest hours were the two rules that first caused the greatest difficulty. A few serious talks on the subject, an explanation for the reason, and emphasizing the hope that it would bring about a speedy recovery and a quicker return home, usually solved the problem without difficulty.

Infraction of rules had to be dealt with by denying some pleasure. Fortunate are the Institutions that have a moving-picture show twice a week. They solve the problem very nicely. The few cases that this fails to reach are more ably handled by a restriction of their "pass". A pass is issued every 30 to 60 days for two to three days at home. While it is not wise to use this method often, a grievous infraction sometimes makes it necessary.

Then again, different types of children require different methods of handling. The problem of the spoiled child is, on the whole, very easy to solve. The usual method is "playing sick", so as to get the indulgent parents very much excited and worried, and in this way securing what it wanted as a reward for taking medicine. When the physician has assured himself beyond all doubt that the child is not really ill, he then will apparently acquiesce to the supposed illness, and will keep the child in bed, while the other children are out playing and having a good time. While all needs are taken care of, there is no fussing and no extra attention given; and this soon results in a "marvelous cure". If the child is kept in bed until a confession is forthcoming that there was nothing the matter, the trouble is usually over on that score. This lack of favoritism will often do a great deal to cure these children, and they develop into great sticklers for routine for themselves as well as for the other children. An addition of fifteen or thirty minutes to the regular rest hour, for the youngster who was unable to rest or let others rest, often drives a lesson home with a minimum of discomfort to all concerned.

Entirely different from this case is the child who has been neglected at home. This class of children rarely, if ever, complain, and a strict watch is needed to prevent them from hiding the fact that they are not well. The rule that the physician should follow is, to see every child twice daily as well as examine the temperature chart carefully, which will insure a strict check up on such children.

School Work

Whether neglected or spoiled, all children must have their training in the "Three R's:—reading, 'riting and 'rithmetic". The educational feature is usually carried out by the Board of Education where the institution is located, and is commonly divided into kindergarten, grammar, high, and vocational schools. The amount of school work must be adjusted to the child's physical condition. Often, vocational and high school work can be combined. Much training can be combined with entertainment by permitting school talent plays, musical concerts and the like. The more they are taught to depend upon themselves for amusement, the more self reliant they are when they leave the institution.

Cooperation of the Child

The Weight Chart

It is always important to secure cooperation on the part of the child, whether for routine or to secure interest in the progress of the cure. One of the best methods for this purpose is the Weight Chart. In fact, we would

call it the most important, as it gives tangible evidence to the child, and (more important) to the parent as well. A large chart hung on the wall with the weight recorded weekly is a great help. If you want to know what the children think of "Weight Day", just pretend to forget it one week, and you will be deluged with questions as to whether or not "do we get weighed"? You can get more enthusiasm about the cure by the weight chart than all other things put together. Every child's normal weight is recorded together with its age, height and expected gain, figured out for each week, and the child knows how much is lacking for the week and month. Besides, it is a most valuable check-up in the progress of the case.

The next thing that has a good effect on both, parent and child is the monthly examination which keeps the physician in touch with the welfare of the child better than any other means, if it is carefully done. There is less chance for things to go wrong with the child if a monthly examination is given.

Prevention of Epidemics

A close watch must be kept to prevent the development of epidemics which find a fruitful field where subnormal children are gathered, especially such as are found in a Tuberculosis Sanatorium. Various infectious diseases do find their way into the wards, such as scarlet fever, diphtheria, erysipelas, phlyctenular conjunctivitis and various other diseases. It is gratifying to me that, in four and one-half years' work, there were only about four epidemics:—one each of whooping cough, measles, mumps and chicken pox. When a case is "picked up" in the wards, whose only symptom is a rise in temperature, isolate it immediately, and diagnose it as soon as convenient. As soon as it is determined that your "pick-up" is one of the contagious diseases, the whole ward should be quarantined for the necessary time to see if any more cases develop, while every child should be given Calcium Sulphide (Abbott) as a prophylactic during the entire time of the quarantine. Toxin-antitoxin should be given as a routine measure on admission, as a prophylactic against diphtheria.

Treatment of Tuberculosis

Treatment of the child suffering with a tuberculous infection can be summed up in the order of importance as follows:—Rest, diet, fresh air and sunshine, exercise, routine hours for arising, eating and sleeping, correction of physical defects and medical treatment.

Rest:—At least ten hours in bed out of every twenty-four, and daily rest hours at least three hours per day.

Diet:—Plain, wholesome food with especial attention to a balance between protein, fats and carbohydrates, rather than too much stress on the "caloric fad". The calories are sometimes good for a check-up, but the other features should receive the most attention. Include milk in place of all other beverages, morning, noon and night, at least a quart daily.

Fresh air and sunshine:—At night, windows wide open, with bedding to correspond with the weather conditions.

Exercise:—Definite hours of exercise in the open air.

Routine:—Teaching regular habits of work, study, play, together with definite bed time, getting-up time, and rest time.

Correction of physical defects:—Removal of diseased tonsils, adenoids, drainage of suppurating glands, treatment of carious teeth, and correction of other abnormalities.

Medical treatment:—Perhaps one thing that stands out more clearly than others is the use of pluriglandular therapy for the dysfunction of the gastrointestinal tract. Other medicinal treatment, as the condition indicates.

Speaking further on the glandular treatment, it is possible to effect a gain of from ten to thirty pounds. We recall one case where thirteen pounds' gain was the result of five weeks' treatment, as well as clearing up of a peculiar skin pigmentation. The intestinal secretions offer us a good field in the case of children suffering from tuberculous infection, because the glands have not been worn out by use and abuse, but respond to treatment that will take the load off of them for a while and give them a chance to recuperate.

Physician and Child Patient

Whether ordering treatment or making examinations, a physician in an institution can have such a delightful time. It is so easy, when a child comes under his care, to let the little one see that he is the friend and not the boss while the homesickness still fills the heart; to talk to it, or, better still, find some litle errand for it to do. Let the child feel that you are his first friend in these new surroundings, and the rest is so easy, for the child sets the one who is kind and patient with it at first, while it is so homesick that it seems that its little heart will break, on a kind of pedestal. After that, the battle is practically won. Anything asked to be done in the way of routine, no matter if it is distasteful at first, will be done so willingly if it is put on a personal basis. To be always just and im-

partial and retain the child's affection, is easy.

When any dispute arises, let each child have a chance to tell its side of the story without interruption. Then let each one be asked as to what penalty should be given. Instead of giving the penalty to the other one, let it be given to the one who would impose it. This is a good check in preventing temper and hard wishes from having too much sway, and teaches the child to be moderate in its attitude to others. Such lessons as these, the physician can instill into the child's plastic mind:—love and consideration for each other, help and assistance for the less fortunate, and justice and square dealing with all, along with the necessary instruction in rest, diet, weight charts, and other essentials of the case.

Truly, the stamping out of tuberculosis lies with the training of the children of today, who will be the people of tomorrow. If, by proper care, we can safeguard their health through the perilous first fourteen or sixteen years of life, so that they enter the period of adolescence with a normal physique, and if, at the same time, we instruct them in the ways and means of guarding against the spread of tuberculosis, we have built up a bulwark against which the most acid-fast tubercle bacillus will quail.

3908 N. Lincoln Street.

The Diseases of the Eye In Relation to General Systemic Lesions

Eye Complications in Acute Infectious Diseases

By BEULAH CUSHMAN, B. S., M. D., Chicago, Illinois

EDITORIAL COMMENT:—This is the second of a series of articles on diseases of the eye in relation to general systemic lesions, which Doctor Cushman is contributing to CLINICAL MEDICINE. *The third article will appear in the next issue of the Journal.*

ANATOMICALLY, the eye is very important in general diseases, as in it the changes in the end arteries can be watched in vitro, as it were. There is no other place in the body that these changes can be clearly seen, and, to be able to see the changes and to analyze the findings, will often aid in the diagnosis and prognosis of existing disease.

The acute diseases, as scarlet fever, measles, whooping-cough, influenza, pneumonia, diphtheria and smallpox, are frequently accompanied or followed by changes in the eyes. These complications are usually associated with the virulent types of infection or develop later in the malnourished patient.

The essential pathology is a metastatic pyemia, and the end arteries of the eyes are quite frequently affected or a secondary infection occurs during the period of debility.

The most common, mild complications and sequelæ in the acute diseases are conjunctivitis, keratitis and blepharitis. Strabismus develops later and will be taken up in another article.

Conjunctivitis is characterized by the injection of the conjunctiva and a discharge. The foreign-body sensation is due to the accumulation of the secretion and the swollen conjunctiva. It may develop at any time during the acute disease or later as a possible secondary infection through contamination from the nose and throat secretions.

In measles, the conjunctivitis with the "Koplik-like spots" along the lid margins is one of the prodromal symptoms and clears up in a few days to a few weeks without any sequelæ, as a rule. It seems to be due to the toxic condition of the blood stream.

In the virulent infections, the conjunctivitis may be followed by an involvment of the cornea as a keratitis or corneal ulcer, or even an ulçus serpens. The ulcus serpens is a rapidly extending ulcer which soon destroys the cornea, and the exciting organism is usually the pneumococcus. Ulcus serpens attacks adults, due to their frequent exposure to injuries which probably precede ulcus serpens. In smallpox, pustules may develop at the limbus and spread to the cornea, and must not be confused with ulcus serpens.

Keratitis, or infiltration of the cornea, may develop with any of the acute infections but, more frequently, it develops during the period of general debility after measles and whooping-cough and has been called keratitis scrofulosa. It must be differentiated from interstitial or specific keratitis which is frequently precipitated after acute infections. The characteristic feature of the specific keratitis is, the history of lues in the family, other stigmata of hereditary lues, as, notched teeth, deafness, the form of cranium, notches on the long bones and a positive Wassermann.

Non-specific keratitis most frequently appears late in an acute disease during the period of general debility, and is a phlyctenular type in which there are small phlyctenules, or lymphoid infiltrations, around the limbus or in the cornea and whose center breaks down, causing a small ulcer. These small ulcers leave permanent opacities depending on the depth of the ulcer and interfere a great deal with the vision if they are in the center of the cornea.

Blepharitis, in which the margins of the eyelids are involved and the hair follicles are infected, frequently follows a conjunctivitis, especially in measles, and it is usually associated with mild or severe infections of the meibomian glands.

Strabismus comes on frequently after acute infections, especially in children, and will be taken up in a separate article.

The paralysis, or paresis, which develops in diphtheria may involve the intrinsic muscles, causing the loss of the power of accommodation, or some of the extrinsic muscles causing strabismus. The paralysis, or paresis, as it may be (as the paralysis of the eye muscles never seems to be complete) is not caused or cured by the use of antitoxin. If the initial dose of antitoxin is large enough and given early, the paralysis probably will not develop, but, after it does develop, to give more antitoxin does not shorten the course.

The more severe and less frequent eye complications in the acute diseases are retinitis, retinal hemorrhages, optic-neuritis, uveitis, iritis, purulent choroiditis and orbital cellulitis.

Retinal hemorrhages develop not infrequently during the spasmodic attacks in whooping-cough and may vary from very slight to extensive hemorrhages and impair the vision accordingly. The extensive hemorrhages usually cause permanent floaters, or opacities in the vitreous.

Retinitis frequently follows diphtheria, whooping-cough, scarlet-fever and measles. Vision is reduced in retinitis, and the patient complains that windows or straight lines look crooked. Normal vision may return but, as a rule, it is never regained entirely.

Orbital cellulitis may be unilateral or bilateral and associated with intraocular changes. There is marked pain, redness and discharge with an exophthalmus. The condition may go on to a panophthalmitis with complete loss of the eye.

Purulent choroiditis, which occurs more frequently after scarlet fever, may cause severe pain due to the associated cyclitis and the vision is reduced very rapidly and permanently damaged.

These more serious complications should always be referred to the ophthalmologist, who is expert in the use of the ophthalmoscope, for diagnosis and prognosis.

In the next article, the eye complications in chronic diseases will be taken up.

[Arrangements are being made for suitable illustrations.—Ed.]

The Salts of Bismuth in the Treatment of Syphilis

By B. SHERWOOD-DUNN, Nice, France
Officier d'Académie; Ex-Colonel, Medical Corps of The Army

IN May, 1921, Professor Roux, head of The Pasteur Institute, Paris, presented before the Paris Academy of Sciences a paper by MM. Sazerac and Ledaviti, relative to their experimental work with the salts of bismuth in the treatment of induced syphilis in the rabbit and later in the human subject. The favorable results obtained by these authors attracted the attention of the medical profession and, at the present moment, the remedy is in use in one of the syphilis wards in one of the largest hospitals in Paris and is being experimented with by many of our best known authorities; the preparation in use being the tartro-bismuthate of sodium and potassium.

The bactericidal action of bismuth was first studied by Sainton, in 1914 (1). His experiments showed that bismuth, even in feeble doses, retarded and sometimes prevented the growth of the bacillus of Koch.

In company with Robert, he experimented with its action upon the spirochæta gallinarum. *In vitro,* its action was practically nil, but *in vivo* its bactericidal action was pronounced. They secured favorable preventive and curative results in the treatment of trypanosomiasis in the guinea pig (2).

Chassevant found in bismuth a treponemicidal agent to be classed between mercury and arsenic (3). Balzar presented a report of his studies of the local and general effects of bismuth in both, the soluble and the insoluble

DR. B. SHERWOOD-DUNN
Doctor Dunn is the only American physician practising on the Riviera.

forms before employing it in certain maladies and notably in syphilis (4). This author utilized a concentrated solution of the citrate of bismuth and ammonia after the formula of the American Pharmacopœia. Although he secured no practical results, he deserves credit for the clearness of his vision, considering the state of medical science at that period.

In animals treated by Sazerac and Levaditi, the administration of a dose of 60 milligrams of bismuth salt per kilogram of weight caused the disappearance of the trypanosomes in the peripheral circulation within 48 hours. With a dose of 100 milligrams per kilogram of weight, the trypanosomes disappeared within 24 hours.

They used an alkaline aqueous solution sterilized by heat at 120° C., during twenty minutes, without decomposition. They found the intravenous injection much more toxic than the subcutaneous or intramuscular. The animals were treated at the appearance of the primary chancre. These authors also claim that bismuth in the form of an ointment acts as a prophylactic in syphilis.

Distribution of Bismuth in Tissues

Post-mortem examination of animals subjected to treatment with bismuth disclosed the presence of this metal in nearly all the tissues.

Orfila discovered it in the liver and his researches were confirmed by Bergeret and Mayençon. In animals intoxicated by the

remedy, these authors found the metal in the kidneys, the spleen, the brain, and an appreciable quantity in the blood. It has also been found in the lymphatics (Meyer).

In a dog intoxicated with the remedy, Dalche and Villejean carefully estimated the amounts of bismuth accumulated in the different organs and found the least quantity in the liver (2 milligrams of the oxide to 15 Grams of the organ). They found the greatest quantity in the spleen (9 milligrams to 15 Grams of the organ). For the same weight, the kidney showed 6 milligrams. These authors demonstrated that bismuth is found in the salivary glands in a notable quantity (6 milligrams to 15 Grams of weight).

First Results

The first experiences with the remedy made by Sazerac and Levaditi were published by the Academy of Sciences and were completed and published in the Bulletin of the Pasteur Institute. Their work brought forth the following conclusions:

1. The salts of bismuth possess a therapeutic action, with respect to certain spirilloses and to syphilis, that is incontestably curative.

2. In the human subject, the tartro-bismuthate of sodium and potassium causes the disappearance of the treponemes in the open lesions. It exhibits an equally favorable action in the primary and secondary periods of the disease as in the tertiary.

3. The soluble is much to be preferred to an insoluble preparation and, of choice, the tartro-bismuthate of sodium and potassium, because of its relatively feeble toxicity as compared with other compounds of bismuth.

4. Intravenous injections of the remedy gave rise to serious accidents. The injections should always be made in deep muscular tissues.

The favorable clinical results published by these authors, in five cases of primary syphilis, two of secondary and two of tertiary, have been confirmed by the more extended experiments made by Fournier and Guénot (5) in the Ricord Annex of Cochin Hospital. These authors treated there 110 subjects suffering from syphilis in its different stages. They experimented with various preparations of bismuth and favor the tartro-bismuthate of sodium and potassium suspended in oil.

In their hands, the rapid and lasting action of this medication in all stages of the disease, and particularly in the contagious stages, has won their endorsement of the remedy as a reliable antisyphilitic agent of the first order. In all of their cases, the Bordet-Wassermann reaction was favorably influenced.

Doctors Marie and Fourcade (6) have also reported the favorable action of the remedy in a number of nervous cases of the disease.

Mode of Preparation

The early experiments were made with the insoluble forms of bismuth suspended in oil. They gave rise to considerable pain at the point of injection, of long or short duration, and a number of the subjects presented, sometimes after the first injection, a blue line to the gums with salivation in some; in other cases, a stomatitis that compelled cessation of the treatment before obtaining the wished-for results, for fear of later complications affecting the liver and kidneys. The experimenters were early led to seek a soluble compound, which was found in the tartro-bismuthate of sodium and potassium, by Jeanselme and Pomaret (7), in the laboratory of St. Louis Hospital. It is prepared in aqueous solution with glucose, neutralized and sterilized by heat, each ampule representing 0.10 Gm. of bismuthotartrate of sodium and potassium without the addition of either anesthetic or antiseptic. The deep intramuscular injection of this preparation was found painless in most cases when made in the same manner as with gray oil or benzoate of mercury.

Like mercury, bismuth forms both, soluble as well as insoluble, salts and it is hardly necessary to point out the advisability of the employment of the soluble form.

It is incontestable that the local deposit of an insoluble bismuth salt in the muscular mass provides for a continued action in the slow absorption of the metal, for a long time, and some authors advocate the desirability of this continued action. But, there always remains the danger of an accumulation of the metal in the system with a possible intense explosion producing aggravated conditions of salivation, gastritis, pigmentation, etc.

The soluble preparation has so far been remarkably free from these manifestations: stomatitis is of rare occurrence and its action upon the treponema is rapid and decided. The dose administered by the different experimenters has been 0.1 Gm. to 0.15 per Cc. or 1½ Cc. repeated every two days. The greatest number of injections made in any one case was 17.

Summary of Results

The results obtained can be summarized as follows:

Primary syphilis: In ten cases of primary chancre, the disappearance of the treponemes was determined by the aid of the ultramicro-

scope. In one case, disappearance in ten hours after the first injection. In four cases, disappearance after fifty hours. In the sixth case, disappearance at the end of sixty hours. But, in this case, they reappeared five and one-half days after, in spite of the fact that the injections were regularly continued without intermission. In addition, this patient presented mucocutaneous lesions. In the four remaining cases, the bacteriological examinations were interrupted by various impediments. In all cases but the one noted, the favorable progress toward recovery did not differ materially from the treatment by arsenic.

Secondary syphilis: Twenty patients treated in general showed a rapid abatement of the cutaneous lesions. In three cases, the roseola and eruption completely disappeared after the second injection, which was in three days.

The papulous, psoriasiform or acneiform eruptions were slower to recede and the oozing points were more resistant to the treatment.

A secondary eruption, consisting of infiltrated and ulcerous syphilides, was cicatrized in twenty days.

A group of secondary, tertiary, ulcerous and ecthymatiform lesions was cicatrized in the same period.

In one case of infiltrated, circinated syphilide of the forearm and of the hip, the lesions were transformed into simple pigmented stains in ten days.

The cicatrization of mucous patches varied considerably. Some disappeared in three and four days; others were more resistant. In one case, the ulceration disappeared 36 hours after the second injection.

In one case, where the plaques upon the tonsils had disappeared at the end of six days, they reappeared after the twelfth injection, when the patient had received 1.20 Gm. of the metal. The action of the remedy in one case was remarkable. The patient, a woman, arrived in a state of secondary eruption, with a temperature of 39° C. (102.2° F.), insomnia, asthenia, very marked anorexia, cephalalgia of intense degree and persistence. After the first injection, the roseola disappeared, the appetite improved, the cephalalgia and insomnia had left her, the temperature was normal and the patient said that she never felt better.

In two cases of violent cephalalgia, the condition improved after the second injection and disappeared at the end of ten days.

In all of the cases but two, the Wassermann reaction was positive at beginning of treatment and remained so during the length of the treatment which was one month in the longest case.

In 40 percent of the 20 cases, the gums were more or less affected, a blue line appearing at the border of the teeth. In four of the cases, a condition of more or less stomatitis appeared. The gums showed a slate color at the border of the teeth, severe salivation with loosened teeth and fetid breath. Three of these patients had previously been treated with an insoluble form of bismuth. None of these showed nodosity or puffiness.

In all of the cases, there were no signs that could be interpreted as Herxheimer reactions, although one of the patients, after the first injection, complained, in the evening, of severe headache which continued for three or four days and then disappeared; it reappeared after the sixth injection.

Dosage

Dosage: In the primary and secondary stages of the disease, the cicatrization of the lesions was secured by the use of from 15 to 20 ampules containing 1.10 Gm. of the salt to each Cc.; the injections were repeated every two days.

Stomatitis was exceptional where this course was studiously followed.

No ill effects were observed after the injection of the contents of two ampules at a time where the injections were spaced at four to five day intervals.

The first experiments were made with insoluble salts suspended in oil and, although the tartro-bismuthate of sodium and potassium is perfectly soluble in water, a preference has been shown for the oil preparation and the soluble product is so prepared, a small percentage (0.5%) of phenol being added to overcome the slight tendency to pain observed.

After completing the first series of injections, a second series can be administered after an interval of a month.

An Adverse Opinion

In general, medical opinion is favorable to this remedy, but our observations would not be complete if we failed to note the authoritative opposition of M. Hudelo.

In his opinion, this medication too frequently gives rise to a form of gastric and buccal troubles which should exclude it from general use. There is no doubt that the employment of an insoluble form of bismuth is prone to cause it to accumulate in the system; it might be absorbed *en masse* and give rise to serious accidents. However the gastrobuccal complications, being caused by a combined fuso-spirillary action (as are all toxic stomatites), are immediately controlled by the intravenous injection of the arsenobenzols.

From the united reports of the different observers, we must conclude that the soluble form of the tartrobismuthate of sodium and potassium merits our attention and is worthy of more complete investigation. Its antitreponemic action is certain; its effect in the primary and secondary lesions is rapid. But the study of this new remedy is too recent to justify definite conclusions as to the extent or duration of its effects upon the disease and relation to the importance of its advantages and disadvantages.

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54 Blvd. Victor Hugo.

The Coccyx

Malformations, Fractures and Dislocations

By CHARLES J. DRUECK, M. D., Chicago

Professor of Rectal Diseases, Post Graduate Medical School and Hospital

MALFORMATIONS and traumatic affections of the coccyx produce a number of symptoms which are sometimes grouped together and termed "Coccygodynia." Under various lay terms, such as "elongated spinal column," "rheumatism of the rectum" and "neuralgia of the rectum," this condition is known in every community.

Surgical Anatomy of the Coccyx

The coccyx is usually formed of four small segments of bone, sometimes but three. It does not contain any intervertebral foramina or the vertebral canal. The upper, first segment is the largest; it resembles the lowest sacral vertebra, and often exists as a separate piece, the other three usually blending to form a single bone.

The junction between the coccyx and sacrum completes the fifth posterior sacral foramen for the transmission of the posterior division of the fifth sacral nerve.

The borders of the coccyx are narrow and give attachment on each side to the sacrosciatic ligaments, to the coccygeus muscles in front of the ligaments, and to the gluteus maximus behind them. The apex of the coccyx is rounded and has attached to it the tendon of the external sphincter muscle. The anterior surface of the coccyx is slightly concave and has attached to it the anterior sacrococcygeal ligament and the levator ani muscle. It also supports the lower end of the rectum.

The different segments of the coccyx are connected by an extension downward of the anterior and posterior sacrococcygeal ligaments, a thin annular articular disk being interposed between each of the bones. In the adult male, all the pieces become ossified; but, in the female, this does not commonly occur until a later period of life. The separate segments of the coccyx are first united, and, at a more advanced age, the joint between the sacrum and coccyx is obliterated.

Malformations of the Coccyx

1. *Absence of the Coccyx.*

Partial or complete absence of the coccyx is not a rare condition although this anomaly may be symptomless. Gant (1) reports on three patients in two of whom there were no symptoms, the absence of the coccyx being evidenced only by a deep depression below the terminal end of the spine. In one, the rectum terminated in an otherwise normal anus; and, in the other, there was a soft bulging tumor (proctocele) the size of an orange, where the coccyx should have been and in which feces collected, blocked the bowel and caused constipation.

2. *Deviations of the Coccyx.*

This deformity may be evidenced by one or more segments of the coccyx or the entire bone being angulated laterally, which is rare, or occasionally posteriorly (backward), but most commonly anteriorly (forward).

Anterior deflection is sometimes very marked, the bone indenting the posterior wall of the rectum. The bowel is forced against this point of bone during defecation and during the accumulation of feces in the ampulla, thus causing sometimes merely discomfort and in other instances excruciating pain. Ulceration of the rectal wall and even perforation due to pressure necrosis may result.

Posterior deflection is most frequently pre-

sented in thin subjects engaged in office work, desk workers and stenographers, who are then necessarily compelled to sit uncomfortably leaning forward to prevent the projecting bone impinging against the chair seat. The coccyx may curve slightly or markedly backward, thus forming a sharp bony projection covered with only skin and very little soft tissues. In thin subjects, the contour of the coccyx may be plainly visible. Callosities (corns) sometimes form on the projecting skin. Such a condition may become ulcerated and erroneously be diagnosed as an epithelioma. In other instances, a rarifying ostitis develops from the frequent bruising of this bone.

Fracture and Dislocation of the Coccyx

Traumatisms, resulting in fracture, displacement or complete detachment of the coccyx and which sometimes involve the sacrum, are rather common as a result of

1.—A fall upon the ice, down the stairs or suddenly sitting down on a small hard object.

2.—A kick.

3.—Childbirth.

4.—Evacuation of impacted feces or foreign bodies.

Parturition is the cause of many if not the majority of these cases. During delivery, the coccyx is forced backward an inch or more. This degree of mobility is permitted by a normal sacrococcygeal articulation; but, if the joint is ankylosed, the bone may be fractured, the joint ruptured or the ligaments torn. Cellulitis may occur in the soft tissues about the coccyx, causing a proliferation of connective tissue, the subsequent contraction of which compresses the fibers of the coccygeal plexus, and a neuralgia or neuritis results.

Symptoms

The symptoms develop promptly after injury. A parturient patient may experience pain and soreness on defecation while still in bed. But, as soon as she sits up, she complains of local tenderness. There also may be a sense of fullness and soreness, or a sharp stabbing pain sometimes radiating up the back and down the thighs. Suddenly sitting down on a hard seat, may cause so agonizing a pain as to cause the patient to faint. This pain may be intermittent but is usually constant, with exacerbations whenever the woman walks, stoops or sits. The act of sitting down or rising always exaggerates the suffering and she may not be able to sit with comfort in an ordinary chair. Because of this very common character of the pain, it has been called the "sitting pain." The sufferer usually sits uneasily, shifting first to one hip and then to the other. The jar of each step while walking causes a twinge of pain and the patient soon leads a sedentary life. Each act of defecation causes pain unless the stools are very soft. This continued suffering soon makes the patient extremely nervous and induces a real neurasthenia.

With anterior deflection, the coccygeal tip pressing against the rectum may cause tenesmus, later diarrhea alternating with constipation, and finally ulceration. Gant reports two extensive perirectal abscesses and fistula caused by coccygeal puncture of the rectum.

Diagnosis

Deformity or disease of the coccyx is to be thought of in every patient presenting anal or sacral pain.

Posterior coccygeal deflection is obvious upon inspection; the little tail-like projection being seen at the lower end of the spine.

Anterior or lateral deflection is suspected by a recitation of any of the above-mentioned symptoms and by the intrarectal findings.

In every rectal examination, the coccyx should be carefully palpated and manipulated to determine any faulty position, undue sensitiveness, abnormal mobility or rigidity, or infiltration of the tissues about this region. With the index finger in the rectum, the coccyx may be grasped between the thumb and finger and carefully palpated and manipulated (Fig. 1.) This determines the particular posi-

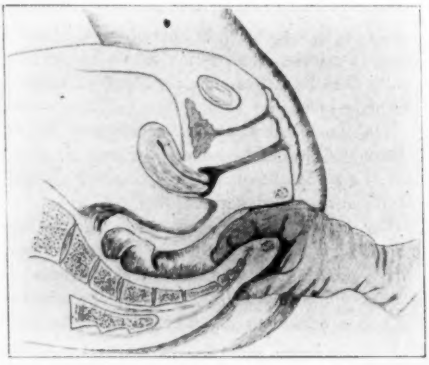

Fig. 1—Method of manipulating and palpating the coccyx.

tion of the coccyx or of the coccygeal plexus of nerves that may be involved.

In mild cases, nothing may be found but a tender spot on one or the other surface or at the tip of the coccyx. In others, dislocation or fracture may be found or a projecting bony spicule. In severe cases, the patient may writhe and scream during examination.

In the case of traumatism due to external violence, the skin and tissues over the coccyx are reddened, ecchymosed or torn. If deeper structures are injured, there may be sharp bleeding from the hemorrhoidal or middle sacral vessels and the escape of intestinal gas or feces if the rectum has been punctured.

A further thorough examination of all pelvic organs is necessary to exclude rectal ulcer, hemorrhoids, fissure, proctitis, cryptitis, papillitis, internal incomplete fistula or foreign bodies in the rectum. Also, the scars of previous rectal operations or disease of other pelvic organs or diseases of the spine or nervous system, as tabes, are to be carefully differentiated. Sometimes, this examination is impossible without an anesthetic.

Treatment

In some instances, spontaneous cure results and recent cases should therefore be treated conservatively. Rest and hygiene are indicated until the acute symptoms subside. The bowels should be kept soft so as to avoid injury from the passage of hard fecal masses. This may usually be accomplished with an ounce of mineral oil given by mouth at night or perhaps twice a day. Sedative drugs and analgesics are to be avoided for fear of inducing a drug habit. If, after a reasonable trial of these measures, improvement is not definite, operative procedures are indicated.

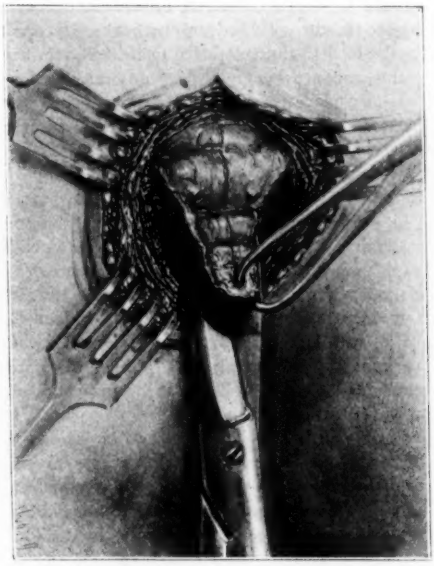

Fig. 2—Coccyx supported by the tenaculum is being under cut with the scissors.

If, following injury, the coccyx is badly fractured, displaced or detached, the disturbed bone must be excised because it cannot be immobilized with bandages or splints.

Excision—Coccygectomy

The patient is placed in the left lateral position upon a large sand bag and the operation may be carried out equally well under local or general anesthesia. A longitudinal median incision, beginning one-half inch above the upper limit of the deformity, is carried down to an equal distance below the tip of the coccyx and by blunt dissection the attachments of the gluteus maximus and coccygeus muscles and the sacrococcygeal ligament are separated from the bone which is now well exposed. With a tenaculum, the coccyx is now supported while all lateral attachments are separated, and it is lifted up out of the wound as the dissection is carried up along the anterior surface of the bone (Fig. 2). By lifting the freed bone firmly and by directing the dissecting scissors always outward, the hemorrhoidal and middle sacral vessels are avoided and the bleeding is minimized. When the exposed bone is freed, it is disarticulated with a pair of heavy scissors.

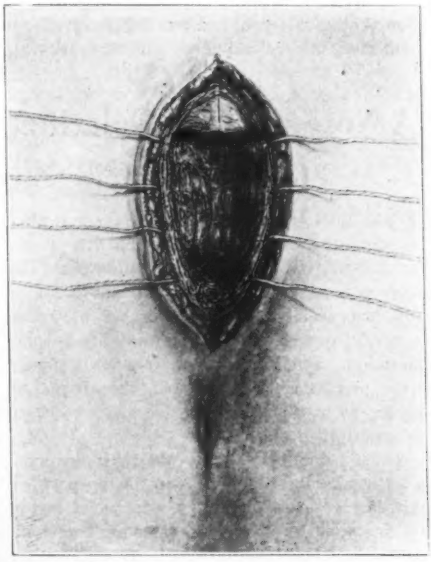

Fig. 3—Deep sutures in place to bring the severed muscles together and close up and dead spaces.

If the entire coccyx is removed, we some-

times encounter a few firm connective-tissue fibers attached to the rectum, which must be carefully separated without tearing. The severed edges of the coccygeus muscle are now approximated in the median line with interrupted catgut sutures. The fascia which had covered the bone is repaired and, lastly, the skin is closed with paraffined silk sutures. Care must be taken that no dead spaces are left anywhere, and accurate coaptation of the skin is essential. The wound is covered with a collodion dressing.

The patient is kept on her side for the first few days and allowed a regular diet. On the fourth day after operation, she receives one ounce of mineral oil three times, to secure a soft evacuation and, after that, an ounce of oil is given each night if needed. The skin stitches are removed on the eighth day and the stool is watched to keep it soft for the next week.

An important postoperative care is, to see that the wound be not contaminated by the feces or urine. If infection occurs, the healing will be extremely slow and unsatisfactory.

Tenotomy is sometimes recommended in lieu of coccygectomy; but, as it is technically as difficult and less certain in its results, we do not use it.

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30 N. Michigan Ave.

A Note on Zinc Gelatine, the Socalled "Unna Paste"

By H. EDWARD AHLSWEDE, Buffalo, New York

Formerly Assistant, Unna Clinic, Hamburg, Germany

PASTES are combinations of fat and powder, the latter being present in a far greater proportion than in any ointment. The high percentage of powder explains the drying, superficial and mild effect of pastes in general, as well as their permeability to perspiration. The fat that they contain explains their penetrating effect which, though not as strong as in ointments, enables them to carry drugs to a certain depth.

These qualities limit their indications. Pastes should be applied for the purpose of influencing disorders of the superficial layers of the skin, such as in all cases of eczematic dermatoses, oozing eruptions showing irritation of the skin, as well as for aftertreatment of eczemas following an ointment treatment, and also for soothing purposes.

In 1883, Unna introduced a zinc-gelatine-glycerine mixture which has ever since been erroneously termed as "Unna's Paste," although this combination is not a paste in the sense of the above definition. The wide indication of Unna's zinc gelatine, its facility of application, its exceptional value in the treatment of crural ulcers, crural eczemas, prurigo, pruritic affections, etc., have made this method practically indispensable in dermatotherapy as well as in general practice. We generally mix the ingredients in the following proportion:

Gelatin. alb.	30.0 Gm.
Zinc. oxid.	30.0 Gm.
Glycerine	50.0 Gm.
Aquæ. dest.	50.0 Gm.

(Thin zinc gelatine)

or

Gelatin.	30.0 Gm.
Zinc. oxid	50.0 Gm.
Glycerine	60.0 Gm.
Aquæ dest.	80.0 Gm.

(Thick zinc gelatine)

The gelatine is soaked in the water for 12 hours and then dissolved by heat. The zinc oxide is then rubbed up with the glycerine and added to the gelatine. These gelatines are solid and are generally kept in tins. Before use, we place the tins in hot water, then stir contents till they are liquid and ready for the brush.

There are two practical methods of application:

Methods of Application

Method 1.—The liquid warm gelatine is carried with a soft brush onto the dermatosis, e. g., an itching eczema. While the gelatine is liquid, a thin layer of cotton is dabbed on in flakes to form a felt-like protective which can be left on for several days. The idea is, to exclude the air from the skin by protecting it with a layer of gelatine.

Method 2.—This has become a standard method for the treatment of varicose crural ulcers. There is also probably no preparation to equal this for use in the dermatitis which accompanies varicose veins of the legs. The gelatine permits natural evaporation to go on freely and, consequently, does not heat the parts; it exercises a useful compression, allays itching and protects against injurious external influences. In winter, the proportion of gela-

tine may be increased and in very warm weather diminished. Zinc gelatine is also an excellent medium for fixing a dressing on any part of the surface where it is difficult to apply a bandage.

Technic of Zinc Gelatine Dressing

The leg, e. g., which is to be wrapped up, should be placed high. After careful cleaning with soap and water or benzine, we advise the application of a thin layer of a 3-percent zinc-ichthyol paste (drying effect) with one thin layer of muslin to cover. The warm, liquid zinc gelatine is then brushed over the whole. Beginning at the toes, we then wind a muslin bandage around the leg up to the knee. Each winding gets a soaking with zinc gelatine which is then left to dry. This procedure is repeated 3 to 6 to 8 times, according to the support one wants to give to the leg. It is advisable, at the commencement of the treatment, to apply two layers only. If, on the following day, the patient does not complain and the dressing fits well, a few more supporting layers may be added. The best adaptation of the muslin is obtained, in my experience, by cutting it off after each winding and starting afresh. Circular turns may be crossed by strips running along the length of the leg from knee to ankle.

Ulcers may be covered also, unless oozing is too strong. The zinc gelatine dressing should be carried around them leaving convenient gaps for possible ointment medication or physiotherapeutical measures. Thus, if an ointment is applied to the ulcer, the whole may then be covered up in the ordinary way with circular gelatine muslin turns. We have left this dressing on for months. It should be changed in the event of complaints from the patient or in cases of too profusely oozing eczemas.

Zinc gelatine may also be combined with drugs. Ichthyol, 5 percent, and sulphur, 5 to 10 percent, are the usual additions.

A Home-Made Pneumothorax Machine

By J. A. DUNGAN, M. D., Greeley, Colorado

MANY physicians, these days, are awakening to the great use to which a capable pneumothorax machine may be put in one's office or surgical equipment. The expense involved in the purchase of such an apparatus has hitherto been a great item in reducing the number of these useful machines which might otherwise be a part of the doctor's armamentarium.

I have the pleasure herewith to present the description of a very cheaply constructed, home-made machine, but one which does not lose in efficiency because of that fact, while, on the contrary, it has a number of advantages that machines commonly sold on the market do not possess.

The Case and Shelf for Bottles

The case, entire, is to be constructed of well-seasoned, soft-pine timber dressed to one-half inch in thickness, free from knots. It is to be joined with glue and screws and should then be finished in a mahogany stain and, if desired, varnished.

Its dimensions (inside measurement) will be, height, 21½ inches; width, 7 6/8 inches; depth, 7½ inches. A brass drawer-handle is screwed onto the top of the case to make portability easy.

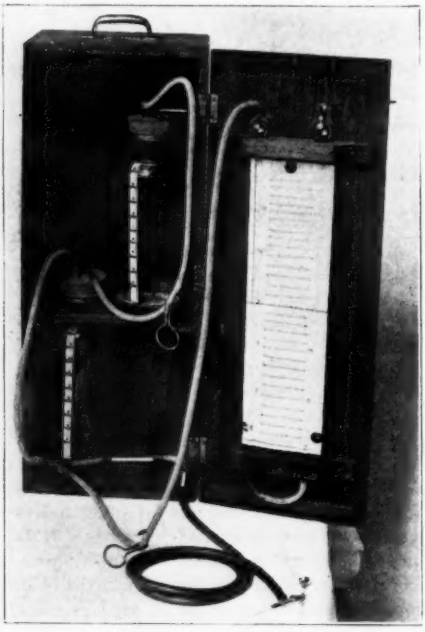
The Shelf. This shelf, which is placed upwards from the bottom, eight inches (inside measurement), is constructed of half-inch pine timber dressed and finished as before stated and made in two fragments, the rearmost of which is of a depth of 2½ inches, while its width is, of course, the same width as that of the case, namely, 7 6/8 inches. This fragment, which receives the half of two perforations, each of which is of a diameter of 2 6/8 inches, is fixed immovably into the case. The anterior fragment, being of a dimension of 5 inches in depth and of a width the same as the other fragment, contains the other halves of the two aforementioned apertures. It is removable for the purpose of the superimposition of the pressure bottle containing the fluid, and slides in and out easily in grooves made of insets of pieces of timber affixed laterally and horizontally to the sides of the case the dimensions of which are each (four in number) 1x½x6 inches. To prevent the manometer tubes from closing upon it, as the door to which the manometer is affixed is closed, the front fragment has an ellipse, 1 inch in depth, removed from its anterior edge. The inner edges of the two apertures are 1¼ inches apart, and the outer edges are equidistant from the sides of the case.

The Door and Manometer

The door, the dimensions of which are: Width, 8½ inches; height, 21¼; thickness, ½

inch, contains the manometer on its inside surface and is affixed to the case by three brass hinges. As shown in the illustration, it opens doorwise, and in front.

Three pieces of timber, placed crosswise upon the inside surface of this door, are noted. The upper two, which are for the purpose of maintaining the manometer tubes in position are placed (and fixed in position with screws horizontally, downward from the top 3¾ inches, and upward from the bottom 2½ inches. Each of these two pieces is pierced vertically by two ½-inch apertures which are 3 inches apart and equidistant from the outer extremities. Their dimensions are 1x⅞x7¾ inches. They may be diminished by bevelling at either end for the sake of appearances.



The lower-most of the three is affixed (upwards from the bottom) horizontally, ½ inch; its dimensions are: thickness, ¼ inch x length, 7⅜ inch x width, ⅝ inch. This simply maintains the door in position when the latter is closed. It is to be held by flat brass hook-and-eye latches, in case and door.

The Manometer

This consists of two vertically placed glass tubes, of a length of 17¾ inches, connected together at their bottom ends with a 5-inch length of ¼-inch rubber tubing and flaring into bell-shapes at their upper ends, although the tube nearest the case, as the door stands open, is again drawn (by heating) back to a diameter to receive the ¼-inch rubber tube which connects with the T-tube and returns the air pressure from the thorax of the patient to the manometer. The glass tubes of the manometer are ¼ inch in diameter. There is an indicator for the manometer which consists of a piece of white, stiff cardboard, 13¼ inches in length by 4 inches in width. This is affixed by thumb-tacks to the inside of the door and stretches vertically between the two perforated cross-pieces before described and behind the two manometer tubes. This piece of cardboard contains markings which signify the degree of fluctuations in the manometer tubes of the fluid with which both are filled to the zero-mark and which latter is placed about the middle of the cardboard. Naturally, this fluctuation is brought about when air returns from the thorax of the patient by way of the T-tube and indicates that the pleural cavity has been entered by the needle. The horizontal markings on the cardboard divide it into six large spaces and twenty-nine smaller ones. Three of the large spaces are above the zero-mark and three below it. Fourteen of the smaller ones are above the zero-mark and fifteen below it. I will first indicate the dimensions of the six larger spaces with their markings, give the number of smaller spaces into which each is divided, with the marking given to each space, when it will be easy for the reader, who wishes to construct his own machine, to accurately mark his cardboard index.

These general spaces will be numbered 1-2-3-4-5-6 from above downward.

Space 1. (The spaces are all 2 inches in width, thus leaving an inch of cardboard on either border for marginal markings.)

Height, 1½ inches, marked marginally 15 and divided into four equiextensive spaces.

Space 2. Height, 2 inches, subdivided into five equal spaces. Marginal mark 10.

Space 3 (just above zero mark). Height, 2¼ inches, subdivided into 5 equal spaces. Marginal mark 5.

Space 4. Height, 2 inches, just below zero mark, subdivided into 5 spaces. Marginal mark 5.

Space 5. Height, 2¼ inches, subdivided into 5 spaces. Marginal mark 10.

Space 6. Height, 2¼ inches, subdivided into 5 spaces. Marginal mark 15.

The zero line should be made in red ink and is exactly 6⅝ inches down from the top of the card. The top boundary line of the

top-most space is placed downwards 1 inch from the top of the card.

Vertical markings in red ink should mark the inner and outer boundaries of the six general spaces as well as their smaller subdivisions: The other markings can be done in black ink, except the zero line.

The Bottles

These are two in number and will be lettered A and B. The former, representing the bottle to be superimposed on top of the shelf and containing the Mercuric Chloride solution (1-2000) in distilled water, some of which solution is used to fill the manometer tubes to the zero mark, and the latter (B) bottle representing the air reservoir, which is placed in the lower compartment of the case. Both bottles are of the same dimensions, however. The corks, of rubber, are perforated twice each for the passage of ¼ inch glass tubing. They (the bottles) may accordingly be interchanged, if there is need, in the case under treatment for the injection of more air than 1000 Cc. in which case, of course, the appropriate alterations will be made in the rubber-tube connections.

The necks of both bottles are held, except when in use, inclosed in the apertures contained in the shelf of the case. By this method, they are held securely in position during transportation from place to place.

The bottles should be of the best glass and are of an outside measurement as follows: Height, 8½ inches. Diameter, 3½ inches. They contain each approximately 1000 Cc. The neck is smaller, being: Height, 1 inch and diameter, 2½ inches. At the top of the bottle, is a projecting rim and, below the neck, is the shoulder of the bottle proper. They take a number-12 cork of rubber which is perforated twice, the perforations being 1 inch apart. Each bottle receives two glass tubes of ¼-inch diameter: All glass tubing used in the apparatus is of this diameter, outside measurement. Since the glass tubing of each bottle is exactly the same, I shall merely designate it by the Numbers 1 and 2. Number 1 is the shorter, in fact merely extending through the cork, although the end projecting above the cork is of a length of 2 inches and is bent at right angles.

Number 2 is the longer tube and extends through the cork nearly to the bottom of the bottle. In this, also, 2 inches of the tube is above the cork and, like the other one, is bent at right angles. By numbering these tubes in this manner, the connections of the rubber tubing to be presently described will be the more easily grasped by the reader.

Rubber Tubing, T-Tube, Filters and Connections

Eleven feet of ¼-inch rubber should be provided. This will be cut into seven smaller pieces numbered as follows and the connections being given, with the length of each piece.

Number 1 extends from manometer tube to shaft of T-tube, 31 inches long.

Number 2 extends from No. 2 tube, bottle A, to No. 2 tube, bottle B, 25 inches long.

Number 3 extends from No. 1 tube, bottle B, to T-tube. Length, 17 inches.

Number 4 extends from distal end of T-tube to first filter. Length, 3½ inches.

Number 5 extends from first filter to second filter. Length, 3½ inches.

Number 6 extends from second filter to needle. Length, 42 inches.

Number 7 is a general-utility tube mainly useful for suction of the manometer tube to obtain the reduction of the fluid to the proper level at the zero mark.

The T-tube is of glass, ¼ inch diameter, and can be secured at chemical-ware stores or can be made. Its staff measures 2 inches in length and its horizontal portion measures three inches. The filters which, as indicated above, are inserted into the tubing between the T-tube and the needle, measure 4 inches in length. They are both filled with sterile cotton.

The Needle and the Thumb-Release Clips

The needle I use is of English make and costs five dollars, but any needle for the purpose here indicated may be used as well.

Three thumb release clips are necessary.

Number 1 is placed on tubing numbered above Number 1.

Number 2 is placed on rubber tubing above indicated under the number of 2.

Number 3 is placed on the tube numbered above Number 6.

Bottle A being filled and in position on the shelf, the connections being made as above indicated, the manometer being filled to the zero mark with the Hg solution, the tubing with filters and needle from the T-tube having been rendered sterile, the apparatus is now ready for use.

To secure indications of air pressure (registered in the manometer from the thorax of the patient), thumb-release clips Nos. 1 and 3 should be open. When fluctuation is noted in the manometer sufficient in extent to indicate that the needle has entered the pleural cavity, clip No. 1 should be closed and clips 2 and 3

are opened and the fluid descends by gravity from bottle A to bottle B, and drives the air out of the latter through tubes 3, 4, 5, and 6. The air is filtered in its passage and enters the cavity through the needle.

Amongst the many advantages accruing to the physician from this apparatus may be noted the following:

1.—It can be made and put together ready for use, including needle, for an outlay in cash not to exceed fifteen dollars.

2.—The tubing from the T-tube on to and including the needle can be detached in one piece, thrown into the autoclave, and sterilized before use.

3.—By means of the handle placed on top of the case, the machine, which does not (all-told) weigh more than twelve pounds, can easily be transported from place to place.

4.—The bottles, being of the same size and construction, with identical glass tubing, can be interchanged as desired, and thus any desired amount of air may be injected into the pleural cavity with a minimum of trouble.

5.—The apparatus will use any type of pneumothorax needle.

Doctor G. B. Gilbert, from whom I secured most of the details of this machine, says that he has used it for years with entire satisfaction.

Take 'Em All in All

PEOPLE are pretty good people,
Taking them all in all;
You can find a good spot in the worst of the lot
(Often it's very small);
But most of 'em go on trying,
Doing the best they can.
I haven't a rap for that hard-working chap—
The average human man.

People are pretty good people,
Trying hard to be kind,
And the wrong they do—except a few—
Is just because they're blind,
Blind and bothered and busy,
Harried by toil and strife—
For work and fret is the game they get
All of the years of life.

They do good deeds in silence,
Hiding their love away,
And few are told of the hearts of gold
Throbbing in mortal clay,
The hearts that always answer,
Hearing the rightful call—
People are pretty good people,
Taking them all in all!

—BERTON BRALEY.

Surgical Seminar

Conducted by GUSTAVUS M. BLECH.

Discussion of Surgical Error No. 2

RECAPITULATION. We concluded our labors for the year, just passed, by submitting for discussion a letter from a Nebraska physician, who furnished the material for the present discussion and who incidentally desired information as to why I made a small incision for an appendectomy, a very large one for a gall-stone case, and a round one for an inguinal herniotomy.

Inasmuch as the principal subject has little if any relation to the question of surgical incisions, let us dispose of these first.

That the question of surgical or, rather, operative incisions is either too elemental or too uninteresting, can be seen from the fact that, of all our collaborators who sent in discussions, only one—Dr. Junger of Soldier, Iowa—touched on the subject just enough to hint that they are a matter of personal technic and that the operator is the only one who can and should explain. I begin to suspect that our colleague in Iowa has been in the army for he seems an adept at the gentle pastime of "passing the buck."

Personally, I would say that I am very glad that Dr. L. has sent in this inquiry, because it has sufficient importance to merit consideration.

When I was a very young surgeon, I made a special effort to make as small incisions as was humanly possible in all abdominal operations and, for that matter, anywhere on the human body. Bystanders who saw me operate said nothing either in praise or condemnation, but one or two of my assistants complained bitterly that they could learn very little, as I did not give them a chance to see "the inside." The more they kicked, the better pleased I was, for it strengthened my conviction that I was preferring the interests of my patients to those of my assistants. True, small incisions meant more difficult surgery, and the teaching, that surgery was dissection of the living tissue pure and simple, remained in my case a beautiful theory. It should be added that I have never been able to rid myself of the impression that every operation of a bloody character carried with it not only surgical trauma but more or less mutilation and that, accordingly, it is the duty of every conscientious surgeon to reduce the mutilation to the greatest possible minimum.

Gradually, however, I came away somewhat from this view as a general proposition. After all, the trauma of the external incision, *per se,* is not so great as to merit special consideration, especially in surgery of the abdomen and, by continually watching the clock, I learned that I could complete an operation faster when I had incisions large enough thoroughly to expose the surgical field proper. As an example, I used to make comparatively small incisions for hysterectomies, except, of course, when there were adhesions or malignant involvement of adjacent structures. Now, try as I might, such an operation lasted about forty minutes. By so enlarging the incision that retraction of the wound margins thoroughly exposes uterus, ligaments, etc., I can accomplish extirpation of the uterus in about twenty minutes.

Inasmuch as the abdominal wall is not often exposed to public gaze, the question of cosmetic effect in abdominal surgery is of little importance. Men do not usually much care for a scar or two hidden under the clothing, and sensitive women have but to avoid public Turkish or Russian baths to restrict exposure of their bodies to those who have a right to see it. This leads me to the subject of the Pfannenstiel incision. I used to be quite enthusiastic about it, but after some experiences gave it up and, lately, I resort to it only for laparotomies below the umbilicus in unmarried women, provided that they insist on the avoidance of a visible scar.

In accordance with what has just been said, it would appear that I am not consistent, since Dr. L. specifically calls for an explanation of why I made a very small incision for an appendectomy as late as last year. The answer is that, if I can perform an operation in a satisfactory manner through a small incision, there is no need making a large one. The case under consideration was one of chronic appendicitis and the operation itself was per-

formed during a free interval. Dr. L. has seen that I experienced no difficulty in delivering the long, thickened and kinked appendix through the small wound and that, after its removal, I succeeded in inspecting the cecum, ileocecal junction and a portion of the ileum, all of which was done under a moist sponge with very little exposure of the intestine; and thus was enabled to exclude the presence of kinks, adhesions or membranes interfering with the lumen and mobility of the intestine in the right lower quadrant.

The round incision for inguinal hernia may not stand critical reasoning. What Dr. L. did not mention in his letter was, that this patient had had a previous operation for the same trouble by another surgeon and that I operated for a recurrent hernia, that the dissection was not quite easy and that, in resuturing the diverse structures, the fact that the skin suture is away from the site of that of the aponeurosis, additional security against recurrence is provided. True, the external or skin suture is of little moment as far as the firmness of the belly wall is concerned, and yet, theoretically at least, a suture away from that of the external oblique (its aponeurosis) acts like a mild splint on the deeper layer. Then again, a stitch abscess or two cannot easily extend to the lower suture line. In a strong, muscular belly, this precaution may be inconsequential, but in the majority of hernia cases, the wall is not the strongest and every precaution counts. The incision, by the way, is always begun at the top and, when the region of the external mouth is reached, the knife is laid aside never to be used again until resterilized.

As regards the proper incision for gall-bladder disease, this will be discussed by me in commenting on the second part of Dr. L's communication, which I termed

Surgical Error No. 2

because the question of an error is to be determined.

Dr. L. operated on a stout woman, aged 51, for what was properly diagnosed as gall-stones. He made an incision, about three inches in length, along the left costal arch. There was some bleeding when the peritoneum was first nicked and then enlarged with scissors, but the bleeding was completely controlled by pressure. The gall-bladder appeared in the wound, was hard to the touch in the upper part, but palpation revealed no concretion in the cystic duct. The bladder was dissected off its liver bed, the duct was ligated with linen thread and amputated. The finger was swept around the duodenum and, nothing abnormal being found, the wound was closed without drainage. Immediate uneventful recovery and discharge home twenty days *post operationem.*

Two weeks after discharge, all the symptoms of gall-bladder disease, from which the patient had suffered before the operation, returned. An opiate gave relief. Two days later, another attack with some icterus. Another physician was called, who stated that the patient's symptoms were due to adhesions affecting also the stomach, by which he explained why the patient vomited (vomiting was not observed by Dr. L). The patient was taken to a hospital in another town, there operated on and drained, and she died four hours later from shock.

Dr. L., who had all this information in a roundabout way (since the attending physician who succeeded him and he were not on friendly terms), considered the recurrence of the symptoms and asks wherein he erred, if err he did. The requirement called for a free discussion on the data as given.

Discussion by Dr. Oliver H. Griffith, Wheeling, W. Va.

I think that the symptoms described by Dr. L. point to a movable stone in the common duct, which was overlooked at the first operation. This is a very common mistake even in the hands of good surgeons.

On the other hand, I am inclined to rule out the diagnosis made by the physician who was called in after Dr. L., namely, that the recurrence of the symptoms was due to adhesions involving the stomach, as unworthy of notice.

Had the common duct been opened, explored, freed from calculi and drained, the patient, in all probability, would have gotten well permanently.

While no blame attaches to Dr. L., I would suggest that the cystic duct should have been ligated with chromic catgut and a rubber drainage tube sewed to and over the stump of the duct. In a few days, there would have been drainage through the tube. After removal of the drainage tube, there would have been intermittent flow of bile through the wound, which would have pointed to the necessity of reoperating for occlusion of the common duct.

Discussion by Dr. J. A. Dungan, of Greeley, Colorado

It is most probable that, in the case cited by Dr. L., of Nebraska, as having undergone a cholecystectomy at his hands and reopera-

tion thirty-four days later, elsewhere, with death resulting four hours after the operation, from shock, the chief desideratum, which was not attained at the first operation, was drainage, perhaps with T-tube, of the cystic and common ducts, which, I am convinced, would have taken care of any leakage from the stump of the cystic duct.

It is not at all impossible that the linen thread had, in the course of time, cut through the rather firm tissues of the cystic duct, permitting the bile to escape into the peritoneal cavity.

Cancer of the gall-bladder, in its very early stage, too, must be taken into consideration as a possibility. It must not be forgotten that, whenever so present, it has a tendency to reassert itself in a rapidly degenerative form shortly after operation.

Discussion by Dr. A. L. Wellman, Waterloo, Ontario

As a constant reader of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, who has been much interested in and benefited by the discussions in the Surgical Seminar, I deem it proper to contribute my mite with reference to the case presented by Dr. L. of Nebraska, which in itself is very interesting and offers great opportunities for discussion.

I submit the following criticisms:

First. An incision about three inches long in the case of a stout woman is hardly large enough to do an amputation with ease and to explore the entire region.

Second. I like to introduce a gauze drain through the lower end of the incision along the line of the dissection of the gall-bladder down to the common duct, to be removed in forty-eight hours. When removed, the track left by the gauze facilitates the escape of vascular oozing or of accumulated serum.

Regarding the recurrence of the trouble, we must consider: first, stone in the hepatic duct or some of its branches descending and blocking the common duct, and second, inflammation of the head of the pancreas.

Adhesions would have produced a kink in the small gut which would have become manifested by pain, vomiting, partial or complete obstruction, but not by icterus, at least not necessarily so.

A large incision at the first operation would likely have shown the presence of stone or stones in the hepatic duct or in the common duct near the ampulla.

Postoperative adhesions, provided any were there, are not to be laid at the door of Dr. L's operation.

It is a regrettable fact that, here in Ontario, too, we have a few physicians of the type of Dr. L's colleague in his town.

Discussion by Dr. E. C. Junger, of Soldier, Iowa

After briefly alluding to the question of operative incisions, as given above, our friend and contributor, in a manner befitting the name of the town he lives in continues:

There is an ethical side to the question concerning Dr. L's operation, which I do not propose to let go unnoticed because it is overshadowed by the technical points involved. I refer to the worthy who, in the guise of a practicing physician and neighbor of Dr. L., took the case away to a hospital in another city. If his motive had been humanitarian, little could be said in criticism, but no one can read Dr. L's earnest report without reading, between the lines, the mental agony caused him through the "diagnoses" or, rather, innuendoes broadcasted by his "friend, the enemy." For characters such as he, a forcible though rather primitive method of manipulation against his mandible seems the only effective remedy, since appeal to his manhood would fall on a vacuum.

I cannot say that Dr. L. has performed the cholecystectomy as is done in the average case, I even grant that a stone in the common duct may have been overlooked entirely; yet, I cannot excuse the censure by his contemptible competitor.

I myself had my gall bladder removed and, for a year after that, suffered from a number of severe attacks characterized by colicky pains, with jaundice to boot. But, it never occurred to me to have any but the kindliest feeling for the surgeon who gave me the benefit of his skill, for, I well knew that the hepatic duct has the nasty habit of breeding stones as if to spite modern biliary surgery.

I am strongly inclined to the belief, that the woman in question should not have been subjected to a second operation so hastily.

Editorial Comment

It goes without saying that, a day or two after receipt of Dr. L's letter, I answered by mail, as the non-edited missive was of a distinctly personal character. I warned the doctor that the material seemed appropriate for the Seminar and that I would publish the principal data without, of course, betraying his identity.

Dr. L. is a young, earnest man, who is spending annually a few weeks in large medical centers, there to watch other surgeons at work. That is the way he came to see

me. I was afraid that the rather sharp criticism, which I felt bound to send him, would add insult to injury; but, to my great surprise, I received a few days later a reply in which he expressed his gratitude for the advice given him.

As the letter was rather lengthy and as some part of it is already published in connection with the discussion of operative incisions, I will republish the substance of the letter in rather general terms.

Biliary surgery, to my mind, is difficult, exceedingly difficult. I even believe it to be more difficult than brain surgery. For, in the latter, the principal difficulty lies in diagnosis, while, in the former, the diagnosis, though important and difficult under certain conditions, is less difficult than the operative technics.

In my humble opinion, young surgeons have no moral right to attempt biliary surgery until they master the operative technics from alpha to omega. Lest this be interpreted as a slur on many able young men, I may state that I know a number of competent and even popular abdominal surgeons, who have equally no moral right to do biliary surgery, and who just get away with it because there is the element of luck. In other words, they can do a cholecystectomy very nicely—even through a very small incision—and, as luck happens, there was just enough trouble in the gall-bladder to drive the patient to the operating table, and the removal of the viscus put a quietus on all annoying symptoms.

When one compares the social and economic successes of some of the operators I have in mind with those which I have NOT attained, it may sound somewhat presumptuous on my part to make the following statement, but, science and truth have little in common with wealth and fame, and, as a truth-loving scientist, I feel it not only my right but my sacred duty to point out that many of these operations are performed on insufficient diagnostic data and therapeutic indications. I may be criticised for this, because, many times, you see the surgeons I have in mind open the removed gall-bladder and triumphantly invite your attention to the "beautiful" gall-stones contained therein, all of which impresses the students and "country cousins" who do not know any better. But, occasionally, there is an iconoclast in the amphitheater and you will notice that, when he asks a few inconvenient questions, the surgeon either shrugs his shoulders or gives an evasive reply and hurries to his office to gather in the harvest of his professional fame and emoluments.

Stones in the gall-bladder *per se* are meaningless. If I, good reader, could show you, say, through x-ray plates taken by different men, that, beyond the shadow of a doubt, you have concretions of the gall bladder, and, outside of being around the fifties and working like a beaver and eating like a wolf when you are hungry and digesting your food and enjoying a good cigar and the affection of your family, there was not a thing the matter with you—would you let me or any other surgeon take you to the operating room and drain your gall-bladder? Certainly not. You would tell me and my plates to go to a hot place because, as long as you have no pains, no biliary attacks of a pronounced character which have resisted medicinal treatment for some time, you would know that these concretions do not amount to a row of pins, and you would be absolutely right.

Now and then, in the past, we have discussed the pitfalls of abdominal phenomena from a diagnostic point of view, so I may be permitted to lessen this labor by omitting any further reference to this theme, for, with sixteen below zero outside, and the den I am writing in being chilly enough to stifle all enthusiasm, one prefers to think of pleasant things. But, you get my point.

This leads me to the subject of incisions for biliary disease. If you have before you a patient with biliary disease of sufficient intensity and degree to call for surgery, you cannot possibly know beforehand whether the disease is restricted to the gall-bladder or whether there is involvement of the ducts. Is it not rational to make an incision which will enable you to obtain a good view of the ducts? *Aut Cæsar aut nihil!* You either are an abdominal surgeon competent to solve any surgical problem in connection with biliary surgery, or you are not, no matter how great an abdominal surgeon you may be otherwise. If the former be the case, operate, but make your incision as becomes a thorough surgeon—large enough and properly. If you are not all prepared to take care of complications involving the ducts, duodenum or pancreas, for Heaven's sake! tell your patient that you are specializing in something else and send him or her to another surgeon whom you know to master the technics, for, in the end, this will prove more profitable all around.

I said, the incision should be long enough and properly done. That must be interpreted to mean that it should begin at the xiphoid cartilage and go down in one shape or another

—I care not which you prefer—so long as to afford good exposure. The stouter the person, the larger the incision will have to be. The incision in itself requires knowledge and technical skill, but, as I am not writing on technics, I must refer the reader to modern standard treatises on the subject.

Criticism number two. Dr. L. has said nothing about ligating the cystic artery. I take it to mean (and he has since written me that I guessed right) that he threw a ligature around the pedicle as it presented itself to him after he had dissected off the gall-bladded. I must say that Dr. L. has been exceedingly lucky. In all probability, his ligature did include the cystic artery because it happened to be in intimate contact with the pedicle; but, nine times out of ten, with such a technic, the cystic artery would have been severed and, as it is a fairly large blood vessel, would, in the course of an hour or so, have led to a profuse secondary hemorrhage with dangerous consequences.

Perhaps this element of luck was due purely to faulty technics, which in this case appeared to have averted a calamity. Dr. L. has not dissected out the cystic duct but has thrown a ligature around the duct with its peritoneal covering, obscuring its relation to the common duct. If there was pathology; Dr. L. could have seen it. I do not even know whether he amputated the cystic duct or merely a lower portion of the gall-bladder, since a dilated cystic duct and the cystic portion of the gall-bladder resemble each other so closely that only after properly dissectiong out the duct can the true anatomic situation be defined.

With a small incision, this may have been too difficult to undertake, for, often, I have found it necessary to divide the ligamentum teres before obtaining a good view even with a large abdominal incision, especially so in fat people.

I am inclined to close my criticisms right here, because one error necessarily leads to another error, and, in this case, Dr. L. has NOT been able properly to palpate the hepatic ducts and the common duct, he knew not whether there was a stone retroduodenally, to say nothing of the condition of the pancreas.

The patient undoubtedly had a recurrence. It would be idle guesswork to say with any degree of certainty why she had the recurrence, except that the causative factor had not been removed in the first place; for, otherwise, there would have been freedom from trouble for a long time, perhaps forever, certainly for a number of years.

Had he drained (which he should have done, no matter how ideally the amputation was accomplished; that is to say without visible spilling of pus, blood or serum) we should have had something tangible to go by. As it is, we do not know but that part of the gall-bladder was still left behind and whether or not there were stones or infected material in the cystic duct, hepatic ducts or common duct.

One thing must be insisted upon and that is, that, in all cholecystectomies, the cystic duct must be removed as close to its junction with the duct as possible. Otherwise, the very object of the operation is defeated.

While Dr. Junger has done my poor old heart good by his suggestion *in re* the *physician* (???!!!) who so contemptibly utilized this case to undermine Dr. L's standing, in his community, as a surgeon, we must not forget that we live in a socalled civilized era, that is to say, it is bad form to let the world know that our civilization is only a veneer. Often I have felt like wringing one or the other man's neck, not because they wronged me personally (I would not give the snap of a finger for that), but because, under our present technicalities of law, one can do little to punish greed, maliciousness, ignorance and deliberate neglect. The state has licensed a physician—the state can do no wrong, *et voilà!*

However, there IS a better way of destroying unfair competition, and that is, by high-class work, by conscientious work and by a deep sense of responsibility to those who entrust their lives to us. All the churches in the world, all the religious systems and all dogmas weigh as nothing compared with the ethical dictum: Do unto others as you want to be done by. That is all the church membership I have ever held and ever will hold.

Streptococcus Infection; a Case Report

By Dr. E. L. Meredith, Ogallala, Nebraska.

Having just read the Surgical Seminar for December, I thought that it may be of some interest to report the sad case of my own father, about twenty years ago, while I was a sophomore in medical school.

My father was then about 38 years old. While he was chopping kindling wood, on Christmas eve, a piece was thrown which struck his left cheek, producing a very slight skin abrasion. He rode to town, a distance of about four miles, to participate in the customary exercises. Christmas morning at about eleven o'clock, his face became

swelled and the entire neck and face showed a typical erysipelas. There was rise of temperature. After twenty-four hours, the face and neck swelled beyond recognition of the features, with the thermometer hovering around 105° F.

A trained nurse was in constant attendance and epsom salt packs, stimulants and antistreptococcus serum were freely administered.

On the third day, he became delirious which persisted until the end. Calcium sulphide, too, was given, but to no avail. I was at his bedside (as I spent the Christmas vacation at my home), and the Seminar vividly recalled to my mind the character of the pus, which, as you aptly put it "when once seen is never forgotton."

Nevertheless, I desire to assert that I have full confidence in the efficacy of calcium sulphide in infectious cases.

While I do not actively enter into discussions, I enjoy reading the Seminar and, with best wishes and the compliments of the season for all readers and contributors, express the hope that the field of usefulness of the Journal may continue to expand.

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[The above case is interesting in that the infection took such a rapidly fatal form in the expression of erysipelas of the face. Certainly, the late father of our correspondent received appropriate care. Dr. Meredith shows that, even as a young student, he possessed a keen power of scientific observation. Such men have no right to read the Seminar or any other department offering opportunity for discussion without active participation. I appreciate the kind expressions very much. I am always glad to hear, formally or informally, from our readers; but I have been quite a while at it; am trying to the best of my limited ability to make this department as interesting as possible, not only in a purely scientific sense but from a practical standpoint, and I am going to ask Dr. Meredith and all my friends of the Seminar for a little (belated.—Ed. *A.*) Christmas present in the form of an occasional contribution. —Ed. Seminar.]

Surgical Problem No. 14

A girl, without any previous history except the usual diseases of childhood (measles, pertussis), who has been in excellent health and is by occupation a stenographer, marries at the age of 23. She always did have a "slight indisposition" during the first twenty-four hours of her otherwise normal periods. These continued regularly, after her marriage, for nineteen months, when she missed her menstruation. Amenorrhea persisted and to this soon was added morning sickness, etc. Pregnancy proceeded normally and, in due time, she was delivered of a seven-pound boy, after twenty-two hours of labor, without recourse to instrumentation of any kind.

A week after delivery, the patient got up and, in another week, returned to her employment as a stenographer, which occupation she had not given up during her married life, as both she and her husband were anxious to accumulate sufficiently to be able to purchase a home of their own.

A few months after the birth of her child, which was fed artificially, she began to complain of vague symptoms of lassitude, inability to concentrate on her work. She also began to suffer from vague pains in both sides of her lower abdomen.

She had been constipated even before her marriage; but was much more so since the birth of her child. Laxatives of all sorts did very little good, at best affording only temporary relief.

The abdominal pains increased, making her very miserable and, finally, she consulted a woman physician.

She gave her history essentially as stated. The doctor made a vaginal examination, pronounced the case to be one of *retroflexio* uteri which she declared to be the *causa causans* of all her troubles. She proposed operation to which the patient demurred. As an alternative and as a therapeutic test, the physician proposed a course of treatment with tampons and pessaries intravaginally, which was gladly accepted and carried out. Two months of this treatment failed to produce amelioration of the condition and, now, the physician triumphantly pointed out to the patient the truthfulness of her first position and promised to operate on her without any considerable scarring up of her body. Assured that in two weeks all would be well, the patient accepted surgical treatment and underwent the Alexander-Adams operation for shortening of the round ligaments.

The operation was well done, but the results were highly unsatisfactory, her symptoms continuing unabated.

Eventually, the patient came to me and another operation of an entirely different character was decided on and performed, with highly satisfactory results.

The character of the operation, based on a totally different diagnosis than that made

[*Concluded on page 136*]

The General Practitioner

Talks About Professional and Personal Problems
Conducted by WM. RITTENHOUSE.

Albuminuria of Pregnancy

OF the various ills of pregnancy, the most serious is that condition of the kidneys which is manifested by the presence of albumin in the urine, lack of proper elimination, edema, and retinitis; and, finally, by convulsions at or near the time of labor. The condition is the more dangerous because the patient's attention is not attracted by the early symptoms and she may not consult her physician until grave damage has been done. Edema is the symptom that first attracts her attention and, too often, her female friends assure her that this swelling of the lower extremities is of no consequence and that it is nearly always present. It is true that edema is often merely the result of pressure of the gravid uterus upon the venous circulation.

It was formerly not an uncommon occurrence for a patient to go along unconscious of danger until the actual onset of convulsions; and, in consequence, the mortality was high.

But, fortunately, at the present day, a larger proportion of women put themselves under the care of their physician as soon as they realize that they are pregnant; and doctors give more attention to the state of the kidneys than formerly.

I believe, however, that the methods of dealing with this condition are not as effective as they might be. There has been a good deal of loose thinking upon the subject, and consequent failure to recognize what are the most important features in this condition.

The one really important feature is lack of elimination. The woman who gets rid of her waste products properly is not going to die of convulsions. The presence of albumin in the urine, edema of the feet, legs, hands, or around the eyes, are all more or less important, but they are secondary to the patient's elimination of wastes as indicated by the *amount* of urine excreted considered in relation to its *specific gravity.* A small quantity of urine of high specific gravity may mean as much elimination as a large quantity of low specific gravity; but the patient is safer when the quantity is free and the specific gravity fairly high at the same time; and when this is the case, the presence of considerable albumin need not cause undue alarm.

I have frequently had cases in which, by treatment, I was able to bring both, the amount and the specific gravity, up to a point where there was fair elimination, but a considerable amount of albumin persisted in spite of my efforts. Those cases have always come through safely.

There is a tendency, especially among recent graduates, to attach undue importance to the presence of a little albumin. This is not to be wondered at when we consider the possibility of a tragic end to these cases; but, it is all the more reason for adhering to rational measures in their treatment.

The loss of the albumin is not the dangerous feature. The patient could lose a good deal without harm, but the albuminuria is like a flag of distress calling attention to the real danger—lack of elimination. Pulling down the distress signal, does not necessarily remove the danger. But, if we can secure elimination, it is not so very important whether the flag is pulled down or not. As a matter of fact, however, the treatment that improves elimination does also reduce the albumin, and this fact furnishes a convenient means of comparison from day to day of the results of our treatment.

Uranalysis

Every pregnant woman should put herself under the care of her physician, and he should make occasional examinations of the urine. If albumin appears, or the quantity or specific gravity are too low, the examinations should be frequent. If retinitis exists, the case is grave. When retinitis attacks only one eye, the patient herself may not discover it, as the other eye may serve her fairly well. For this reason, if there is albumin present, it is well to instruct her to test each eye separately, every few days, by trying to read ordinary print with the other eye closed or covered.

In having the patient ascertain the amount of urine passed in twenty-four hours, it is necessary to give explicit instructions; otherwise most of them will do it so unintelligently that the result will be deceptive. Suppose, the order is given to collect the urine from seven A. M. to the same hour next day. Unless carefully instructed, most of them will include the urine passed the first morning. It does not occur to them that that was secreted during the preceding night and, therefore, the collection will represent a good deal more than twenty-four hours. Of course, that voided at the beginning of the collection should be thrown away.

The whole collection for twenty-four hours should be thoroughly mixed, the specific gravity taken, and a portion saved for testing. This test may include a complete laboratory analysis, if preferred, although a very quick and simple examination will answer every purpose for the busy doctor who has little time. All that is necessary to be known can be found out in a few minutes.

For ascertaining the specific gravity, the ordinary flotation urinometer is most convenient, but one should also have a bead urinometer for use when the sample of urine furnished is too small to float the ordinary instrument. With the beads, one can find the specific gravity of even so small a quantity as half a dram. It is in the greatest emergencies that the sample is likely to be small, as in convulsions.

It is important to have a convenient method of comparing the proportion of albumin from day to day, as this is a fair, although not absolute, index of improvement or the opposite. The method I prefer is the following, on account of its simplicity and convenience:

Have a test tube over 100 millimeters in depth. Pour into it urine to the height of exactly 100 millimeters. Bring the upper half to a boil. If the liquid remains clear, there is no albumin. If a precipitate forms, it may be albumin or it may be phosphates. Add 2 or 3 drops of a weak acid (vinegar will do). If the precipitate clears up completely, there is no albumin. If there is albumin, boil the whole tubeful very thoroughly. Unless thoroughly boiled, it will not always settle. When settled so that the supernatant fluid is quite clear, measure the height of the precipitate at the bottom of the tube. For example, if there are 23 millimeters of albumin at the bottom, it means, roughly speaking, 23 percent of albumin by volume. Of course, this is not strictly exact, but it answers perfectly for comparison day by day to ascertain whether the patient is gaining or losing ground.

Etiology of Albuminuria

In regard to the etiology of this condition, little is known with certainty. It has been attributed to pressure of the enlarged uterus obstructing the return circulation from the kidneys, to a poison developed in the mother's system from fetal excretions, and to other causes. But, as theorizing has little value, I shall not take up the reader's time discussing this feature of the subject.

About the only point upon which I feel sure is, that the woman who practices good hygiene at all times is less likely to have this condition than the one who pursues the opposite course. Most women's habits of eating and dressing are very unhygienic, and it is time and effort wasted to try to convince them of the fact. They may be convinced and still pursue the course which fancy or fashion dictates. Only a week ago, a woman, who is noted for her slavish obedience to fashion, consulted me about a chronic sore throat. She was dressed in the latest style—(nearly) invisible stockings, bare neck and shoulders. She had ridden, on her way to my office, on the top of a boulevard bus. She was so cold that her teeth chattered. When I pointed out the relation between her sore throat and her unhygienic way of dressing, she admitted it all, but said, "It's the style—they all do it, and so I have to."

If women will not live hygienically at other times, they ought, for their own safety, to do so when pregnant. The number of cases of albuminuria would be greatly reduced.

Good Sense in Diet

Some doctors give their pregnant patients advice regarding diet that seems to me to emphasize the unimportant and neglect the important points in the matter. As soon as a little albumin appears in the urine, the order is given to avoid all albuminous food, such as eggs and meat. Now, I insist that this is a very superficial view to take of the nature and significance of albuminuria of pregnancy. It seems to be based upon the idea that the loss of albumin is the evil to be combatted, and that, the less albumin is ingested, the less there will be to excrete. The doctor who proceeds on this theory is, in my opinion (to use a hunting phrase), barking up the wrong tree.

The evil to be fought is not the loss of albumin, but the lack of elimination. It is not what she is losing that is alarming, but what she is not losing—namely, the waste products of her system. The capillary bloodvessels of

the kidney are congested and their walls relaxed; consequently, some albumin leaks through. The presence of albumin in the urine serves to call attention to the real difficulty—a sort of flag of distress. Pulling down the distress signal is not necessarily relieving the trouble. To cut off albuminous foods, does not increase the eliminative power of the kidney, and, if it would entirely stop the escape of albumin, it would be no proof that elimination was restored to normal. That can only be determined by observing the quantity and specific gravity of the urine.

Cutting off all albuminous foods may interfere somewhat with the patient's proper nourishment. It is important that her health should be kept in as good a condition as possible, and in most cases this can be best done by such a diet as would be conducive to health if she were not pregnant—just ordinary, plain, wholesome food.

I have made it a rule to give my patients in pregnancy instruction regarding diet that in substance could be expressed thus: "Follow as nearly as may be your usual habits of eating, except where those have been faulty. Nourish yourself well, but be careful to use moderation as to quantity. The great fault of most people is, eating too much. The fact that you are eating for two is no reason for gorging yourself as some women do, under the mistaken belief that, otherwise, the fetus would not be properly nourished. The extra nutriment required by the fetus from day to day is so small as to be negligible. If you have a craving for certain articles of food, eat them in moderation if they are wholesome, but, if unwholesome, resist the temptation. Pay no attention to the old superstition that you will mark your baby if you do not get the thing you crave. To eat unwholesome food because you crave it, may do you harm. Such a craving is unnatural. To sum up the whole matter, live as nearly as possible your usual normal life in eating, drinking, working, exercising, and sleeping. Establish good habits of hygiene, also in bathing and ventilation. Do not go to extremes in anything. Fads are dangerous and, if your lady friends try to persuade you to adopt them, let them talk, but depend on your doctor for advice. Common sense is better than theories. And beware of the woman who tells you, 'Oh, you ought to have Dr. Blank. He is the most up-to-date man in town and has all the new ideas!" The chances are ten to one that Dr. Blank is a faddist—one of the kind who tries to build up a reputation by intimating that all the conservative, reliable men are woefully behind the times.

I have never forbidden eggs and meat to my pregnant patients, except in such cases as I forbade all solid food. There are conditions of the kidney in which a milk diet is for the best, temporarily. Because of the belief of some doctors that albuminous foods ought to be excluded when albuminuria is present, I have made it a rule to observe very closely those patients who were in that class; but I never saw any reason to think that I was mistaken in permitting them to enjoy eggs and meat within reasonable limits.

Treatment

As for the treatment of albuminuria of pregnancy, I have for forty years depended mainly on digitalis. When I began practice, my second obstetric case developed severe albuminuria. On the advice of the late Professor Loomis, of New York, I adopted the digitalis treatment. It proved so satisfactory that I have depended upon it ever since. I have often wondered why its value is so little known.

To get results, it is necessary to push its administration boldly to the point of producing its physiological effects. Small doses are useless.

The best way is, to begin with a fairly large dose and increase it steadily until the pulse is decidedly slowed. When that point is reached, the good results begin to show themselves. The secretion of urine increases, the specific gravity rises, and all the symptoms improve.

It is, however, necessary to bear in mind that we are giving large doses of a powerful drug, and to exercise watchfulness accordingly. I have seldom had a patient develop convulsions if I had time to put the digitalis treatment into effect. I have had two cases where light convulsions occurred: but the one patient was in most unhygienic surroundings, and the other disobeyed orders.

The form of digitalis used is a matter of choice. A generation ago, the best we could do was, to give the infusion. But it is bulky, nauseating and uncertain in strength. Today, we have the alkaloids and concentrations, and we have liquid preparations from which the most nauseating properties have been removed. The fat-free tinctures have served me well. At the present time, there is no better preparation than Digipoten (Abbott). It is convenient and accurate.

Book Reviews

Following the appearance of the December

issue of CLINICAL MEDICINE, several readers wrote expressing disappointment at not finding my usual review of Christmas Books. For this omission, there are two reasons: first, illness on my part and, second, the delayed announcements of the publishers. Most of the best new books were not announced until late in November or early in December.

Now, a monthly magazine takes more time to get out than a daily or weekly paper. From the time an article is written until the magazine reaches its readers, from four to six weeks must elapse. So, the review of a book published December first would not appear before the February issue. This delay is inevitable in the very nature of magazine work.

In the future, I shall review the books I select whenever they appear, irrespective of the season.

It is seldom that a book has such a sale as "The Americanization of Edward Bok," reviewed in this department two years ago. The Scribners have published 25 editions of this notable book, and the sale shows no signs of falling off. Everybody who reads it recommends it to his friends. The 25th edition is issued at the popular price of one dollar. The format of the book is a little less expensive, but the subject matter is identical with that of the three-dollar editions. This is a graceful recognition by both author and publisher, of the cordial reception of the book by the American public. It meets admirably the demand for an edition which can be purchased by individuals and employers in large quantities for gift purposes.

* * * *

Idioms and Idiomatic Phrases. By Frank H. Vizetelly, Litt. D., LL.D., and Leander J. de Bekker, 498 pages. Price $2.00 net. New York: Funk & Wagnalls Company, 1923.

This is a most interesting collection of the phrases and expressions that contribute so much towards making the English language the most picturesque and expressive tongue of modern times. For the writer and speaker, it is a sort of dictionary of the utmost value. But it is also a book of interest to the general reader; good to pick up and dip into at odd moments for its literary quotations of bright and spicy expressions. When I get started turning over the leaves of this book, I find it hard to stop. It is "Just one more!", like listening to the radio long after bedtime.

Can you tell the difference between an idiom and an idiotism?

"He doesn't know B from a bull's foot," is an idiom; a metaphor of stupidity. The comparison is apt, for the print of a bull's foot in the mud resembles a capital B.

"In the twinkling of a bedpost," is an *idiotism;* a bedpost does not twinkle. Yet, when the phrase originated long ago, it was readily understood. The original form was "In the twinkling of a bedstaff." In olden times, when men slept on ticks filled with straw, hay, chaff, husks, or feathers, a bedstaff was a pole used to beat up a bed to make it soft. A bedstaff in the hands of an indignant housewife might well be said to twinkle when used vigorously as a weapon of offense or discipline.

In the words of an able critic: "It is a book reflecting in all its picturesqueness the idiomatic language of the plain people, explaining the meaning of their quaint and curious expressions and virile metaphors, with copious illustrations of their use from quotations drawn from standard literature and writings of the day, with occasional notes of origin where known. Much of the information given is not available in the dictionaries of the day, but has been gathered from those wide fields of literature not generally available to the average reader."

* * * *

The Value of a Letter

One letter omitted from a sentence will sometimes produce a startling change in the meaning. The following, gathered from the newspapers, are all rendered absurd by the omission of a single letter:

"The conflict was fierce and the enemy was repulsed with great laughter (s)."

"When the president's wife entered the humble sitting room of the house she was politely offered a hair (c)."

"A man was arrested yesterday on the charge of having eaten a cabman (b)."

"A post office employee was accused of having stolen a small ox from the mail. The stolen property was found in his vest pocket (b)."

"A Russian soldier was found dead with a long word sticking in his throat (s)."

After looking at a few Russian words, one is inclined to wonder whether the last sentence may not be correct as it is.

2920 Warren Ave.

Good Medicine

Let us learn as we go, but not forget what we know

Conducted by GEORGE H. CANDLER

The Great God Bunk

IF Diana of the Ephesians was "great," *Bunk* of all the civilized (and semi-civilized) modern peoples, is infinitely greater. For a long, long time, there has been a suspicion that even Diana herself was Bunk, though, of course, like Venus and Aphrodite, she was, if we may judge from her pictures, decidedly "a fine figure of a woman" and eminently entitled to be regarded as one of the beneficent variety. For there *are* varieties (57 at least) of Buncombe, Bunco, or Bunk, and of these at least fifty-six have their being in this Land of the Free. Little did the member of Congress for Buncombe County, N. C., realize that he was making his district immortal when he said "I am talking only for Buncombe"; still less does the average resident of that County know that the Gerat God Bunk of the American people became a definite being as those words were uttered!

The Century Dictionary defines Buncombe as "inflated or bombastic speechmaking" and Bunco as "to swindle or rob by a confidence game; also Bunkum as "balderdash; bombast." Bunk—a further abbreviation—may be accepted as meaning "flap-doodle, hot air, gas, flub-dub, etc., etc." and may be either innocuous or distinctly baneful.

The innocuous, though enervating, garden variety of bunk we all consume freely daily, but, now and again, we are fed the poisonous species and get "stung" more or less severely. However, Bunk anesthetizes his victims before he stings them—quite often, those stung remain semi-conscious, "charmed" so to speak, for a considerable time and waddle wistfully back for another and still another dose. After a while, they get to really like it and remain "dead from the neck up" for the rest of their sojourn here!

The god Bunk is faithfully served by a great number of High Priests, Buncops (*not*, bishops), ordinary Bunkers and lay Bunk-shooters, and their infinite variety and versatility is amazing. Fully aware that a great proportion of the population love Bunk, they give it to them in generous quantities and, though the stuff has no more substance than a shadow, its recipients absorb it avidly and—some of 'em anyhow—grow fat thereon.

National Bunk emanating from Washington, D. C., is particularly plentiful and wonderfully camouflaged; sometimes even quite intelligent non-addicts swallow it whole. Others grumble over the dose; recognize it—even as the small kid recognizes castor oil in root-beer—but absorb it nevertheless. Later, they are very sick, threaten all sorts of things and ultimately do nothing at all or, at best, turn one set of High Priests out and put another in. The really entertaining feature of such procedure, of course, is that, if the "outs" are better Bunkers than the "ins", they are pretty nearly sure to be put in control by the disgusted victims of the less able (late) controllers of the people's destiny! Naturally, one would like here to say a few sane words about the Soldiers' Bonus, the League, the Eighteenth Amendment, Prohibition generally, and a few other things; but the probability is that a large percentage of readers would merely remark "Bunk", and all the sapiency would go for naught. Yet, if you asked each such protestant, "How much Bunk, do *you* think, there is in national politics?" he would probably roughly estimate anywhere from 75 to 90%.

A higher percentage probably obtains in State and local politics. All of which is well recognized by the Bunked and—because of the anesthesia—more or less cheerfully approved. Some day, the people will really THINK instead of thinking that they think, and then the great god will perish, not so much for want of high priests as for lack of votive offerings.

It is a strange fact that the most successful Bunkers are those who most thoroughly Bunk

themselves; they reason, "if I can shoot this Bunk, I shall materially benefit thereby." But, as a matter of fact, when an individual tries to—or does Bunk someone else, he injures himself most materially for the very simple reason that he gives nothing for something, and he who gets to consider this the proper caper soon has nothing to offer even if he would. Of course, it must be admitted that some people Bunk everyone all the time, while others merely Bunk somebody now and again, but the habit once formed is not easily relinquished and the tendency is, to practice shooting steadily.

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If there are High Priests of Bunk in Politics, Commerce, Literature, Music, Art, Law (common and unusual), Love and Everyday Life, there are, of course, very able representatives in the Church and Medicine. The ecclesiastical variety have, as we are all most painfully aware, been shooting their god with appalling frequency of late—they have indeed had a regular *schützenfest,* greatly to the detriment of the faith of the public at large. Now, it may be argued that, as Faith is merely "the substance of things unseen, the evidence of things hoped for," it is not easily damaged. As a matter of fact, nothing is quite so easily destroyed, unless, perhaps, it is an illusion. Most of us, happily, possess early in life many illusions which, unhappily, are, one after the other, dispelled or destroyed as the years pass and we gather experience. So, most of us start out with a greater or less supply of Christian Faith, absorbed to a very great extent at our mother's knee but partly from the teachings of ordained priests and pastors. If our acts here are to be regulated satisfactorily by our Faith in things of the Hereafter, naturally we must firmly believe that what we have been told is correct—or, at least, is honestly the Faith of those who have instilled it into our minds. When we see the very cornerstones of our edifice being rejected by the builders as Bunk, are we not apt to regard the Faith we held as merely another illusion, merely an intangible substance of things we wish were so, but which doubtless are not? Have we not already found things that we wish were so something entirely different? Have not most of our illusions already faded and has not our faith in things seen and unseen generally been shaken disastrously all along the road? Therefore, if the elect renig, if our teachers tell each other "you know you have been shooting the Bunk about the vital point of the Faith," is it not merely human for us to first be shocked and then throw the whole teachings into the discard as—Bunk?

These very poorly presented questions are asked merely to lead each individual reading them to search diligently his own heart and mind and so reach a definite conclusion as to whether he was deluded from the first or is now merely being Bunked by those who have for a time Bunked themselves and now would reform but are not sure how to set about it.

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There is, of course, such a thing as blindly teaching what you were taught and, later, after bringing a mature intellect to bear upon the subject, rejecting it in part or as an entirety. And if the reasoning has been correct, it is the part of wisdom (and honesty) to acknowledge error. However, though one may arrive at certain conclusions, he is taking a very serious step indeed if he thereupon destroys in others that Faith which alone renders their sojourn here tolerable.

As a layman, I would suggest that the ecclesiastical gentlemen, who candidly say they think they have been teaching Bunk, should stop their ministrations, do something else materially useful in this world and KEEP STILL, save, perhaps, in solemn conclaves of Churchmen. It is not wise to take away from the great mass of people the "substance of things hoped for." When each individual is *really* educated, able to reason things out, then possibly one may venture to dissect in his presence things which pertain to the soul, and then, *perhaps,* instead of being weakened by the possession of such definite knowledge as he may absorb, he may be strengthened and become, by reason of using his intellect, a more desirable citizen than he would otherwise have been.

Again, it is more than likely that none of us may dissect the soul Faith which another holds without doing very definite damage—as much damage, in fact, as we would do were we to dissect a living man's body to illustrate to him just how he lives, moves and has his being! If the healer of physical ills hesitates at human vivisection for purely instructive purposes, should not the healers (and builders) of souls think a couple of thousand times before they apply, *pro bono publico,* the scalpel and forceps to the Christian Faith?

Bunk anywhere is, of course, flap-doodle and one doesn't want to build an edifice upon a foundation of that kind. But, human beings have emitted a lot of bombastic flap-doodle about the Sphynx; she is *still there* and keeping perfectly quiet. Therefore, it is well to

consider whether the things talked about or the things talking are Bunk. It is most important not to err in this particular. Or, if one is to err, he might just as well err on the safe side.

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Just the same philosophy applies to Bunk—and the Bunkers (or Buncoists) in Medicine. When you and I came into this world, we knew absolutely nothing about the ills the flesh is heir to or the methods of alleviating or curing such disorders. Even though our fathers and their fathers before them were disciples of Galen, we ourselves *inherited* no knowledge. What we know, we *learned*—partly from the recorded experience of those who worked before us but chiefly by personal experience.

If any one of us possessed all the information contained in all the medical literature extant (which God forbid!) but no practical experience, gained first under the guidance of those who knew and later by applying knowledge so secured alone, he would not be able to minister to the sick as satisfactorily as the practician familiar only with certain proven elemental facts but having a vast experience in their practical application.

I, personally, have seen a most erudite Professor of Anatomy in an hysterical condition because he could not stop a severe nasal hemorrhage occurring in his own family. He had become reduced to such a condition that he had a pledget of cotton under the patient's upper lip and a cold key placed somewhere along the spine. Someone told him these things "would work" and, being hysterical and having had no experience, he had faith that they would. They didn't, but a catheter, some thread and a few tampons (properly manipulated) did. The gentleman knew more about anatomy than I ever shall know (I'm forgetting an awful lot that I did know), but he didn't know what to do when some part of it went wrong.

I also have encountered a most versatile physician, able and willing to turn out a thirty or forty thousand-word article upon any medical subject, who was as helpless as a ten-year-old boy when his wife tripped on the stairs and suffered a miscarriage.

It is an undoubted fact that, given time, that man could have written a paper upon this subject (Accidental Abortion) which would have attracted the widest attention. But, before he could have made his "cold collation" of facts, his wife would have been interred many days. I am quite sure that I never shall know all that he would have written—but, I did know enough—had FAITH, moreover, that I knew enough—to *do* what was necessary. As a result, the lady in the case is not only living but has since borne three healthy children.

All that obviously happened several years ago and, though I am somewhat of an omniverous reader and am so placed that it behooves me to keep fairly abreast of the times, I do not know that anything more effective than the procedures I used in each of these cases has been developed. Of course, when I was let loose, I did not know anything about Luff's theories and did not attempt to increase the coagulability of the blood. Anyhow, there was no time here to try theories—one had to stop hemorrhage and, to do that, it was essential to know where it came from and vision the conditions which obtained at the source. No time for bombastic utterances or flapdoodle practice—no place for BUNK. Merely the definite knowledge of what to do, and doing it properly.

Bunk in Medicine is a deplorable thing. You know that. I know it. But, alas! we have not time to be deploring forever. All we can do is, refuse to be Bunked or to Bunk others—in so far as in us lies. We must not believe that the gathered knowledge of centuries is N. G. because Oppmatax Opisthotonos tell us it is. We must not shoot strange and fearful combinations of irritant or toxic drugs directly into the blood stream of our patient merely because Bucephalus Head highly recommends such procedure. First of all, ask Bucephalus to take a few shots of his own medicine. We must not make other people believe that we can accomplish things which we ourselves do not believe we can do.

We must not cease to acquire knowledge as it develops, BUT we must not forget that which we already KNOW. (I've been waiting a couple of years to say that in the body of an article and, now, I feel happier.)

Moreover, we must know enough to be able to select very carefully from the new dishes which are being served us every day. We should, with the proper application of our working knowledge, be able to detect the Bunk or near-Bunk from useful truths. But, if we have any question as to the nature of the dish, we should pass it up and stick to our own mutton.

We should not—must not—be disturbed by the Bombastic utterances of those gentlemen who tell us that all we have ever done, all we are doing or shall ever do in the way of internal medication, is chimerical—a delusion

[*Concluded on page 136*]

Let's Talk it Over

Can the Poor Boy Secure a Medical Education?

The Situation at the School of Medicine and the College of Physicians and Surgeons of The University of Maryland

EDITORIAL COMMENT:—Mr. Dillon, the author of this article, is a medical student who is making strenuous attempts to acquire a medical education, so as to satisfy his ambition to become a physician. It is quite true that the increasingly high requirements for entrance into the medical school and for admission to the examination for licensure entail courses and periods of study that are all but prohibitive to the poor student; in fact, in most cases, they ARE prohibitive. Can anything be done about it? It has been asserted that there are abundant opportunities for a man to work his way through the medical school. Are there such opportunities? and, if there are, is it possible to carry on serving two masters, studying and earning a living? Let us see.

Foreword

DR. N. P. COLWELL, Secretary of The Council on Medical Education and Hospitals of The American Medical Association, has written an article entitled: "Can the Poor Boy Secure a Medical Education?" which appeared in *The Journal of The American Medical Association* August 18, 1923 (see page 577). I herewith submit for your consideration, a few facts which are pertinent to the subject and are offered in rebuttal to Dr. Colwell's assumption that *abundant opportunities* exist for all. Likewise, they have a bearing on his statement: "The complaint commonly heard that 'there is no longer an opportunity for the poor boy who wants to secure a medical education'—*is entirely without foundation.*"

The Argument

It is with some trepidation that I pen these lines, realizing my inadequacy to handle a theme of this nature. However, a vain wait of several years, for someone to champion this cause, prompts the initiative that lies before all, an evil, which could be modified by a little cooperation on the part of the Educational Council of the American Medical Association.

Why a more capable hand has not endeavored to lay this ghost, is beyond my comprehension. Perhaps our rigid adherence to the conventional procedure is the evil genius that pinions our effort—or else we are duped by the apparition of being called a "common scold."

We may ridicule the *savage* who creates for himself a fetish and then, in awe, cowers at its fancied power. Yet, we are little better when we establish for ourselves a code, called *ethics,* and then practise a ritual that throttles all sense of justice.

Long have I endeavored to interest physicians in the necessity of providing a sane cooperative plan to allay the burdens under which self-sustaining medical students are laboring. Alas! how disheartening is the task! Many physicians have little sympathy with the idea, and others, while approving of the plan, tell me that they could not sponsor the cause, because it would not be *ethical* for them to do so.

Why? What is this *Ethics* to whom all bow, the sceptered and the dilettante? Ethics, as I understand it, was first a code concerning itself with the relations existing between the patient and the physician. Later, it incorporated into itself appendages which were covenants, that confined themselves, mainly with the demeanor toward fellow physicians, viz., to refrain from reprisals, to uphold professional integrity and, above all, to band themselves together to war against the common enemy.

Apropos of this, it is noteworthy to recall that, in 1542-3, the medical profession had become so covetous, that: "the practises of Surgeons minding their own lucres" and refusing to aid the poor, compelled Henry VIII to pause in his amours and edict decrees permitting laymen, versed in a knowledge of herbal and folk medicine, to minister to the indigent.

To continue: I suspect, a mercenary motive lies behind this claptrap answer: "It would not be *ethical* for me to plead the cause of

poor students in Medicine." Perhaps a sudden Malthusian conversion prompts this reply, in apprehension that too many physicians may be turned adrift from the nicotine-scented amphitheaters of Æsculapius.

Yet, if this be so, permit me to say: When this condition prevails, then and then only will Medicine have reached its natural level—a vocation, not a bread and butter business.

A List of Costs

I first list the expenses at the University of Maryland Medical School, a fair example of what is fast disappearing: an Institution conducted on altruistic principles, where the majority of the professors receive no compensation and where some are likened to gods. It is, indeed, deplorable that a school of this type, with its allied bodies (The Baltimore Medical College and The College of Physicians and Surgeons), which has done so much for poor men in Medicine, should be *disparaged* by its own Alumni.

The School today is greatly in need of funds. While it receives State aid, the wants are many and scarcely satisfied. The reason is quite evident, when we consider that Maryland is a small State in resources and has no vast enterprises, from which to draw its revenue.

It is not expedient for me to begrudge Johns Hopkins its State appropriations; but, why a rich University like this cannot assume an independent attitude and allow the State to concentrate efforts on the State University, is a matter for conjecture. It was only recently that the Mayor of Baltimore questioned the status of its Hospital, i. e., as to whether it did any charitable work. What an interrogation, after the institution had received so much in private endowments.

Under the present appropriations allotted to the Maryland University by the State, Maryland students can only be apportioned a fifty-dollar reduction in tuition. Contrast the much maligned State of Georgia, which educates its medical students for sixty-five dollars per year.

As for endowments—what a travesty! Why, it has been so long since the University of Maryland received a bequest, that I fear they would not know how to handle it, to say nothing of the shock it would give to its good Dean.

A verification of these fees and estimated personal expenses will be found in "Official Publication of The University of Maryland, Bulletin of The School of Medicine," Session 1923-24, July, 1923, Vol. VIII, No. 1 (pages 40 to 43).

Fees

Matriculation fee (paid each year)	$ 5.00
Tuition fee (each year) for residents of Maryland	250.00
Tuition fee (each year) for non-residents	300.00
Breakage fee (each year)	10.00
Total fees for non-residents	$315.00

Note—No fees are returnable except unused portion of the breakage fee.

Personal Expenses—Based on a School Year of Thirty-Two Weeks

Items	Low	Average	Liberal
Books	$ 27.00	$ 48.00	$ 75.00
College Incidentals	20.00	20.00	20.00
Board (eight months)	200.00	250.00	275.00
Room-rent (eight months)	64.00	80.00	100.00
Clothing and Laundry	50.00	80.00	175.00
All other expenses	25.00	50.00	75.00
Total	$386.00	$528.00	$720.00

Note—Several items in first column, "Personal Expenses" are debatable, but, for sake of argument, acceptable.

Scholarships

Number	Cash Value
4 Scholarships	$125.00
1 Scholarship	200.00
3 Scholarships	300.00

Combined Expenses of a School Year of Thirty-Two Weeks for a Non-Resident Student of Maryland

A tentative estimate based on University of Maryland Bulletin.)

Personal Expenses (column one)	$386.00
Tuition (non-resident of Maryland)	300.00
Matriculation fee (paid each year)	5.00
Breakage fee (paid each year)	10.00
Total Fees (combined) for a school year	$701.00

Note—Deduct $50.00 for resident students.

What a Non-Resident Student of Maryland Must Earn, During a Summer Vacation of Sixteen Weeks, to Defray the Expenses of a School Year Provided He Is Self-Sustaining

(Combined lowest estimate—$701.00)

Therefore this means that the student, must earn $701.00 in sixteen weeks, or $43.18 per week. That is, provided he does not have to pay any living expenses during the sixteen weeks. In the event that he must pay board, room-rent, laundry and carfare—add $160.00, which brings the total to $861.00, or $53.82 per week.

What a Medical Student Must Earn Per Week —Even If Awarded a Scholarship at the University of Maryland Medical Department Session of 1923-24
(Note that there are only eight Scholarships)

Resident Students of Maryland

Scholarship Cash Value ($125.00)	Scholarship Cash Value ($200.00)	Scholarship Cash Value ($300.00)
$ 8.75[1]	$ 4.07[1]	$ 2.19[1]
32.88[2]	28.19[2]	21.94[2]
42.88[3]	38.19[3]	31.94[3]

Non-Resident Students of Maryland

$11.88[1]	$ 7.19[1]	$ 0.94[1]
36.00[2]	31.32[2]	25.07[2]
46.00[3]	41.32[3]	35.07[3]

What a Medical Student Must Earn Per Week Who Cannot Obtain a Scholarship

Residents	Non-Residents
$16.57[1]	$19.69[1]
40.69[2]	42.82[2]
50.69[3]	53.82[3]

Note—Procedure used in computating tables: Total the assets of the student and then deduct the liabilities—viz., a self-sustaining non-resident student receives a $125.00 scholarship. It is therefore apparent that his only asset is the scholarship, while his liabilities are: Matriculation fee, $5.00; breakage fee, $10.00; balance of tuition fee, $175.00; personal expenses during school year, $386.00; maintenance during summer vacation of 16 weeks (at ten dollars per week), $160.00. Therefore, the combined expenses are $736.00 which, reduced to a weekly rate, is $46.00.

How to Earn the Money

Now that we have learned the expenses coupled with the study of Medicine, at the Maryland University; let us reflect on the means of earning the finances, sufficient to satisfy the needs of a school year.

How to earn the money, is the question. Let me assure you, dear reader, only those that have experienced it in person can realize its full significance. It is far from the scholastic Utopia that Dr. Colwell describes in his article; and, as for there being "abundant opportunities for self-help," permit me to say emphatically—I doubt it.

This, of course, hinges on the occupation of the student. An established trade, an allied profession or some calling which is fairly well remunerative simplifies the matter. However, a close association with students, during the past ten years, influences a belief that the vast majority undertake the study of Medicine with meager accouterments towards self-support.

[1]No personal expenses.
[2]Personal and school expenses (8 months).
[3]Combined expenses—personal, school and vacation period.

Experience has taught me that employers have little time or need for part-time workers. Some have even refused me employment for the summer vacation period; the instances would fill a pamphlet. However, I shall not bore you with a narration, but will confine myself to the brief statement that, in Baltimore, the gainful occupations ranged from that of a *medical publisher* to that of a *horse doctor*.

Various occupations suggest themselves to laymen as suitable for students, but a close inspection proves them to be foreign to their interests, since most of them entail employment at hours unsuited for part-time work. There is, however, one occupation that has been the means of aiding many students in Baltimore; namely, The American Express Company. I wish I could tell to all how generous this Company has been in this respect. Some pursuits allied to Medicine could profit by their example.

But, even with this aid, the situation is just as Dr. Colwell states it: "A student attending a first-class medical school, today, has less time for outside work, because the medical curriculum requires most of the time and energy at his command." This, I think, is convincing proof that the self-sustaining student must rely to a great extent on his summer vacation of sixteen weeks for his major earning capacity.

Attending the University of Maryland Medical Department, today, are 336 students, 97 of whom are residents. Among these students, are held eight scholarships—4 at $125.00, 1 at $200.00 and 3 at $300.00; while the tuition is $315.00. This is further proof that scholarships are not so abundant as Dr. Colwell would have us believe.

The lowest figure that I can give for a non-resident student who is entirely self-sustaining, and who likewise must confine his earning capacity to the summer vacation, is $861.00, or $53.82 per week. Can the average medical student earn this?

All of this emphasizes the fact that the self-sustaining medical student has rather an arduous task in "working his way," and that the prospects are somewhat restricted, despite Dr. Colwell's statement to the contrary.

A Remedy Proposed

Therefore, some reform is needed in medical education as it exists today. Not, however, a reduction in preliminary standards but rather a provision that will enable all to make the grade, regardless of rank and social station.

The remedy which, I think, would be palliative to these scholastic ills, I have incorporated in an article which appeared in *The Brooklyn Times*, of December 13, 1923. For those who did not read it I will state that the gist of it was: Part-time attendance; loan funds with maintenance; night medical schools and, last but not least, Medical Education provided by the State.

The Medical profession has grave problems before it, today, which are not entirely restricted to "quacks," as some would have us assume. And, yet, we are gradually approaching another "Byzantine Period." Witness our dirty linen in the Connecticut exposé. One is tempted to believe that, unless some remedy is suggested to relieve our rural ills, the people will retaliate by enacting legislation foreign to the purposes of the present standards.

According to a report issued by the State Bureau of Statistics, July 31, nearly 5,000 people died in Georgia, last year, without a medical attendant. On 671 of these records, the cause of death was stated as due to accidents, suicides or homicides, but *4,301* were given as *dying from disease.*

In 1920, the Georgia cities, with more than 10,000 population, had one physician to 425 people, while the smaller cities and the country districts had one for each 1,148.

The decrease in the number of physicians and the centralization in the larger cities, together with the economic conditions, are the reasons given why one death in every seven in 1922 occurred without medical attention. (*Jour. Amer. Med. Assoc.*, Aug. 18, 1923.)

Is this not conclusive proof, that our present system of medical education is *inadequate* if not *unpractical?* Either, country practise is not remunerative, or else, the increasing tendency to specialise is proving a menace to the rural districts, and, how these communities will react toward this Jinni is a subject for speculation

WILLIAM MCCAFFREY DILLON.

Baltimore, Md.

DR. BRYCE'S TALKS

The Over-Cautious Doctor

One of the greatest handicaps to any physician's best work is a self-education of super caution on his part in dealing with remedies and emergency conditions, met with in his practice, that do not admit of delay. I am certain that I cannot call attention to any more important subject than the frequent neglect, by physicians, of important details, both medical and surgical, in the course of various ailments and accidents besetting their patients. I have so often seen such instances, due not only to want of knowledge but to actual cowardice, that I have made it a point to urge upon my younger friends in the profession the necessity of arming themselves with self-confidence and reliance if they wish to avoid the sin of unpardonable neglect with its recurrent penalty of regret.

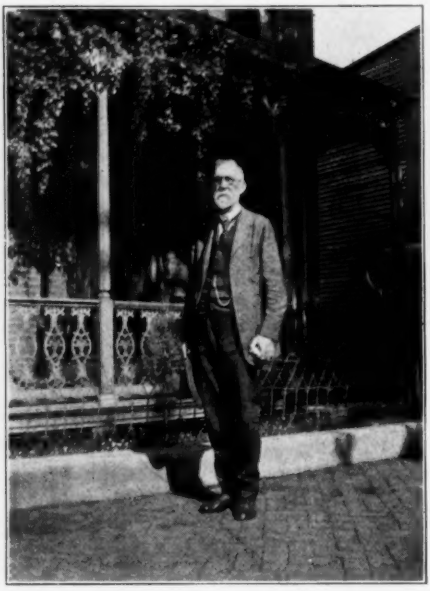
In my earlier days, I enjoyed the friendship of a doctor who was a professor of physiology in a certain medical college, and one of the best-read men I ever met. But he was the poorest practitioner I think I ever saw, in consequence of his extreme adherence to the exact text of his authorities, from overcautiousness. He knew when strychnine, aconite, gelsemium, atropine, morphine and other potent remedies were indicated, but he seldom ever got the remedial effect of any drug that had possibilities of doing damage in an overdose. He let his fears of poisoning his patients possess him so thoroughly, that he rarely got any therapeutic results from some of our best remedies. I have seen him, when I had him in consultation when symptoms were very urgent and time was valuable, quietly inquire the child's age and with pencil and prescription pad sit and calculate the exact dose required for that particular age. I loved him very much and had him in consultation frequently, but more on account of his high standing and encyclopedic knowledge than as a fearless prescriber. We sometimes struck it beautifully where minimum doses were effective, but he never learned that the proper dose for any patient was only learned by carefully administering the remedy to that particular patient and noting its effects. I have an idea that he was not the only doctor by large odds who left patients without prescribing what he knew was really best for them because he was afraid to try his hand with an unfamiliar remedy.

There are men in our profession who rely so much upon others that they will risk *anything* if they can find it recommended in a textbook or medical journal—an authority to fall back upon, and they will positively do nothing that they cannot back up with someone's endorsement.

Setting a Compound Fracture

I was called to the aid of a doctor who had a compound fracture on his hands and did not remember what his textbook advised. When I reached the patient's home, I found a boy stretched out on a lounge with his foot bent

at right angles to his leg and a sharp piece of a broken tibia sticking through the flesh, four or five inches long. The doctor had been sitting by him for three hours *waiting for help!* He belonged to the class who never take any responsibility upon their own shoulders, and would have probably sat there twenty-four



We are very happy to meet Doctor Bryce, at least in picture. Would that it were in person.—Ed.

Mrs. C. A. Bryce is welcome in Clinical Medicine.

hours longer if someone had not come to tell him what to do or do it for him. I said to him: "Doctor, how shall we fix him?"

"I don't see how on earth we are going to get that bone back. Suppose we shall have to send him to the hospital to a surgeon," he said.

"What for?" I asked.

"This is an unusual case, and the people might blame us if anything went wrong," he replied.

I "shamed" him out of his timidity, borrowed a butcher's saw from a nearby store, cut off enough of the protruding bone to allow me to set the limb, fixed it up in a fracture box and told the doctor to hold his patient and attend him as he should. The boy made a good recovery and, in three months, was walking everywhere on a good leg; and the doctor found his nerve and made a pretty good general surgeon in the fulness of time. [In a case like this, it is always well to call help. —Ed.]

Couldn't Trust Himself to Bleed

I met a physician in a case of puerperal eclampsia who had attempted to bleed the woman. But, with an elusive vein and much fat, he had only succeeded in making many stabs with a thumb lancet. The woman's face was livid and the force of the convulsions almost suppressed her respiration.

"I'll be dogged if I can bleed her," he said.

"We must do it," I told him.

"All right," he replied, "if you stand by me, I'll do it or bust." He just picked himself up —got his head back, and made a long, deep incision through everything down to the blue-black vein and, with a pair of curved scissors, cut it slantwise half across and got a good flow of blood, quieting things down so that I turned and delivered quickly. With liberal doses of tincture of Veratrum viride, I controlled all further convulsions.

Now, this man could have done just as well without me as he did with me if he only had trusted *himself*.

Retention of Urine

I was called, late, one afternoon, to assist a very good practitioner in relieving a case of retention of urine. I found a middle aged man in bed and in apparent great agony. He was on his back with legs and thighs flexed, beads of perspiration over his forehead, groan-

ing piteously and begging me to do something for him for God's sake before it was too late. It was an old stricture case, and I learned from his doctor that he had been called to see the man the evening before and, with the usual outlay of urethral instruments found in the general practitioner's possession, had failed after prolonged pushing and gouging to do anything but bleed him profusely, make a false passage, give him an opiate and leave for the night. The next morning found the man with an enormously distended bladder, and the doctor sent for another physician. I found them both there in the afternoon after another prodding and pushing into an already irritated urethra with unsuitable instruments, and both sitting by the man awaiting someone to save the bladder from imminent rupture.

I must confess, I felt disgusted at the flagrant neglect of this poor man, and said rather crisply to them that, unless the bladder was promptly emptied, it would burst. I took a long trocar from my case and, as I was approaching his bed, one of them said:

"Stop, doctor, don't you think we had better wait and call Dr. ———," naming a prominent surgeon.

The man's two grown sons and his wife were present, and they implored me to do whatever I thought best; the sufferer also begged me to go ahead. I called for a slop bucket and drove the trocar into the bladder on a line with the upper margin of the pubic bone. As I withdrew the canula, a stream of urine shot across the room and we continued to catch it until we had over half a gallon. The poor fellow was fast asleep before the last urine had passed.

A man may be timorous and distrustful of himself, but there is no earthly excuse for any man, calling himself a physician, to deliberately risk the life of anyone relying upon him for the proper attention. If he is ignorant or cowardly, he should promptly call in someone to save the patient, and not wait to call in a physician to save *him* when he has jeopardized the life of the patient to an extreme degree, and often too late to be saved.

Strangulated Hernia

Strangulated hernia is another possibility of danger at the hands of incompetent and timorous men who lose golden opportunities for saving life in temporizing with taxis, relaxants and other time-killing expedients instead of acknowledging their inability and sending for a surgeon before it is too late.

The man who has seen the whole perineal region, scrotum and adjacent region black and sloughing from urinary infiltration due to his neglect, or a gangrenous loop of bowel terminating in an artificial anus from similar delay, will not likely forget it or let it happen again, but I would not like to be the man with this experience.

There are refreshing contrasts to these deplorable examples of inexcusable neglect. I knew a young man who had been practicing only a few years, was poor and struggling and had no influential friends, but was self-reliant, thought for himself, and demonstrated that he had the right stuff in his make-up, as I observed while assisting him in an operation for strangulated hernia. The patient was a negro man living in a two-room cabin on the outskirts of town. His room was poorly lighted, dirty and dusty and unsanitary in every way. My young medical friend had provided a couple of medical students to help us, and asked me to *supervise him as he operated.*

I asked him if he had ever operated for strangulated hernia, and he said no, but he could not learn any younger. I was struck with his reply and told him I was at his service. This was before the days of antiseptic surgery; so, the only preliminary steps we took was, to shave the pubic hair out of our way, throw the patient up on an improvised operating table made by putting two wide planks over two carpenters' "horses," chloroform him and tell the young doctor to proceed. I watched him with much interest to see how far he would go on his own hook as he incised skin and fat down to the aponeurosis of the external oblique. This he divided, then he found the sac and cleared it to the constricting point.

"Am I going right, doctor?" he asked.

"Yes, what next?" I asked.

"Open the sac?"

"Yes."

He split it up, looked over the loop of intestine, satisfied himself that it was in good condition, nicked the constriction and shot the gut back with a gurgle.

I saw that he was trusting his own judgment, and was anxious to see how he was going to finish up. There was a good deal of thickened old sac, and I noticed that he was debating with himself as to what to do with it. I refrained from suggesting anything, but he said: "Doctor what would you do with this sac, put it back in the abdomen or cut it off?"

"What do you think?" I asked him.

"I think it would be a good plan to cut off this surplus, stitch the opening together, sew

it in the internal ring and pack the wound with a little gauze and see if we can't cure him."

The boy did this very thing and made a good job of it. I had no fear about this young man's future, *he had faith in himself.*

Confidence in Yourself

I have been actuated by a "fellow feeling" in urging my friends in the medical profession to cultivate confidence in themselves; for, every physician will meet unexpected and trying cases that will require immediate action, and it is of the utmost importance to doctor and patient that the right thing be done at the right time. In other words, you are going to be called upon to handle emergencies that are entirely new to you and that you have never met or even read of. The great thing is, for you to trust entirely to yourself and have the courage to do what seems the most appropriate thing to be done.

I knew an old country doctor who was called as an expert witness in a malpractice suit in which several other socalled specialists from different cities were giving their opinions, very adversely to the defendant doctor for whom the dear old rusticus was testifying. Finally, he was put on the stand for cross-examination by the plaintiff's counsel, and was asked:

"Doctor, do you consider Gross as a good surgical authority?"

"Yes, fairly good."

"Pancoast and Agnew good authorities?" they asked.

"Yes, good as the average."

"Well, doctor, whom do you regard as the very best authority?"

"I consider Dr. R. G. C—— (himself) the very best authority in this case, for I saw it and know more about it than every surgeon who ever wrote a line or has testified as an expert here, sir," said the game old fellow. The jury thought so too, and the old doctor said to his young medical protégé, "Come on, Jim, they'll pay the costs." That old doctor's dare devil attitude and raucous voice won Jim's case.

516 N. 10th St., Richmond, Va.

IDIOPATHIC ERYSIPELAS

This disease which attacks the head and face, principally, is of an infectious nature and manifests itself by a diffuse serous inflammation of the skin and subcellular textures.

Pathological conditions: Idiopathic erysipelas makes its first appearance in the cuticle of the head and face and exhibits the following characteristic appearance: On the nose, either cheek, one or both ears or on one or both temples, there appears a slight redness which is accompanied by a tense condition of the skin. A burning sensation rather than pain accompanies the invasion. The symptoms soon become more intense, the slight redness is intensified to a marked scarlet and the swelling increases rapidly, closing the eyelids, distending the cheeks and enlarging the ears to, at times, more than double their natural size.

Termination: If the disease is arrested by proper treatment, the inflammation is arrested, the discoloration disappears, the swelling subsides and resolution obtains, without other results, in from twenty-four to thirty-six hours. Unwise or improper interference often, as the writer has witnessed on many occasions, creates dangerous complications that not only cause a lengthy sickness but imperil the life of the patient.

In making the diagnosis of idiopathic erysipelas, which is comparatively simple, the existence of similar cutaneous inflammations must not be overlooked; erythema, which presents some of the symptoms of erysipelas, differs materially in the character of the invasion. Instead of a diffuse and connected redness, the inflammation appears in irregular, circumscribed patches.

Urticaria is easily eliminated, as it generally follows exposure to vegetable poison or to indiscretion in eating. The history of a case of phlegmonous erysipelas is sufficient to eliminate this form from the idiopathic variety. Nevertheless, the writer has seen cases of simple erysipelas converted into the surgical or phlegmonous variety by the unwise use of escharotics or the even more dangerous use of the knife, in the supposition that pus existed in the case in question.

It is the experience of the writer that idiopathic erysipelas is found in many localities in the Northern States as endemic while, in all localities, it frequently appears as an epidemic and is often met sporadically.

The treatment, is simple and effective. As a student, I listened to Prof. Sam'l D. Gross, lecture upon this subject which was reiterated in his "System of Surgery," and I have practiced the same treament for more than half a century and without a single failure The diagnosis being established, a saturated solution of Magnesium Sulphate is applied over the inflamed surface and the towel, or other material used, kept wet by frequent renewals of the solution. The internal treatment is con-

fined to the following:

℞

Magnesium Sulphate	1 oz.
Sugar	1 oz.
Lemon juice	½ oz.
Aqua	8 oz.

Sig. A tablespoonful every two hours.

If this treatment is persevered in, the disease will succumb within twenty-four hours.

One of many cases in point, Mr. S. W. H., age 50, came to me a few weeks ago with a case of marked idiopathic erysipelas, one side of his face being painted with tincture of iodine. The Doctor who had applied the iodine was out of town, and the patient came to me because the other side of his face was attacked. The result: I ordered the treatment as above described and the new invasion was completely checked in eighteen hours, while the part which was covered with the iodine did not clear up until forty-eight hours later. *Verbum sapienti satis.*

W. T. Thackeray.

Fowlerton, Tex.

THE STARVING GERMANS

I have read with interest Dr. Martin's article "Starvation Polyuria and Starvation Edema (this journal, 1923, Dec., p. 873). It tells a graphic and gruesome story of the intense suffering of the German people, from 1914 to the present.

If the author of the article, a medical officer, was in this condition in 1917, what then must have been the state of the army?

The German soldiers, having been for many months in the trenches, returning on furlough to find their children dead and dying from starvation and their women working in fields and factories, had to return to the front to meet the fresh American troops hurled at them. Yet, Premier Francesco Nitti tells us that

"Germany, we must remember, was never beaten in a military sense. In almost all battles, the Germans came out victorious. The English (American) blockade famished Germany and deprived her of all supplies—notwithstanding that, Germany continued to hold out.

"German resistance ended at last, when President Wilson made himself surety for a just peace, in the name of America. Then the endurance of the famished population failed. Why, they argued, prolong the war if Germany would suffer no injury."

"Peace treaties, as soon as Germany surrendered, and gave up her arms, were the negation of all the promises. They were, moreover carried out in the most arbitrary and *dishonest* manner."

This from one of the signers of the Versailles Treaty, who admits that he has perverted the truth to help to win the war.

The opening of the German, Russia and Belgium Archives, the publication, by Premier Nitti, by Morel (now M. P. and member of the Committee on Foreign Affairs), Turner, Bausamnn, (former member of the Supreme Court of the State of Washington), and by many other writers of the allied countries as well as speeches of Lloyd George, have shown beyond a doubt that Germany was not guilty of the war.

In your editorial notes on Dr. Martin's article, you say "truly the war has cost the German people dear and they are by no means through paying for it."

We of German birth and German descent, many million citizens in the United States and amongst them many physicians, have tried to relieve our starving kindred since we were permitted to do so.

In view of all these facts, do you not think that it is time to stop unkind remarks and insinuations about the Germans? Especially so at a time when the members of the American Medical Profession are making efforts to help German physicians, and when General Allen of the A. E. F. is making collections for the starving children?

Otto Lerch.

New Orleans, La.

TRAVEL IN GERMANY

Upon my return, last week, from a four months' visit to Europe, I find the July issue of your Journal awaiting my perusal. On page 517, I have just read the sentiments of Dr. Abramson regarding Germany. I was born an Englishman and am now a naturalized American, so I cannot be considered as prejudiced in my remarks. I was in and out of Germany a half dozen times during my trip through Germany, Switzerland, Austria, Hungary, etc., and my experience and, therefore, my sentiments, are entirely the opposite of Dr. Abramson's.

If Dr. Abramson did not find the average German (and that means 99 9/10 percent, at least) invariably courteous and honest, he is an exception among travelers.

It is true, there exists some anti-Semitic prejudice in Germany at the present time, but such anti-Semitic sentiment is not confined to

Germany, for in Austria and in Hungary, one will not only find dislike but even legislation directed against her Hebrew citizens; and in our own United States a proposed presidential candidate is responsible for much extensively promulgated literature against our Hebrew brethren.

It is also true that an *Ausländer,* or alien, is charged more than a German; although no one familiar with German economics can find legitimate fault with that. But, neither I nor any other traveler was ever charged, as far as I know, even one-tenth the rate that Dr. Abramson quotes in his extracts.

We hear and read so much that is not true or at least is exaggerated or only exceptional, that those of us who have recently traveled in Germany, have lived and talked with the Germans, should be only too glad to rise up and carefully speak and write the truth, the whole truth and nothing but the truth concerning Germany and her oppressed and suffering people.

I do not doubt Dr. Abramson's veracity. I only regret that he should have been such a grievous exception to the general rule. Naturally, a great deal depends upon the personality of a traveler, and a fault finding, aggressive manner will obviously tend to magnify occasional mole hills into mountain ranges of everything that is calculated to give a nation, as well as a dog, a bad name. I met two discourteous Germans during my four-months' trip in and out of Germany, and a German, taking a similar trip in and out of America, would be fortunate indeed if he did not meet with far more to complain of than that.

I shall esteem it a favor, personally and in the interests of fair play, if you will publish this letter in your Journal. As I understand, Dr. Abramson has, like myself, just returned from Berlin, and the sentiments expressed in his previous letters may not now be his present sentiments, I should be glad to write an article in extenso for the Journal, covering my impressions and those of fellow travelers concerning Germany and the German people; also giving some impressions derived from my visits to nearly every physic-therapy clinic in Europe. [This article will be published in next month's issue.—Ed.]

As Dr. Abramson will possibly have the latest revision of his German impressions printed in the next month's Journal, and, being a friend of the Editor's, will presumably have access to this letter before publication, I shall be only too happy to reply to anything he may possibly take issue therein.

However, this is a plain, unbiased statement of facts; the personal experience of myself, and the reflection of the experience of nearly every traveler I have met. Further, the few bald statements extracted from Dr. A.'s letter and published in your widely read Journal demand as widely published a reply.

"With malice toward none, but good will to all."

Joseph E. G. Waddington.

Detroit, Michigan.

Dr. Abramson's Reply

Thank you so much for giving me the opportunity to reply to Doctor Waddington's letter, in which he takes exception to my travelogue on Germany.

I'll cite only two paragraphs of my article which will prove to all concerned that my statements were made without the least bit of animosity or prejudice toward the German people. I said: "Outside of being unfriendly, the German people are wonderful, virile, active and thorough." In another paragraph, I said the following: "The present abnormal conditions make it difficult to distinguish between the real customs and those imposed upon them by the present situation." In fact, I always was and am a great admirer of the Germans, ever since I began to "feed up" on the works of Schiller, Goethe, Fichte, Kant, LaSalle and Marks. I am well aware of the wonderful contributions the Germans have made to science, philosophy, literature and medicine. To me, Germany was always the land of "Denker and Dichter" (thinker and poet.—Ed.). When it comes, however, to being courteous and friendly, I must differ with my worthy opponent. That was not in evidence, at least, when I was there.

Hundreds of incidents in my personal experience and hundreds more in the experience of others, will bear witness to the truth of my assertion. So much was the hatred against foreigners rampant at that time, that the subject was brought before the then newly organized A.M.A., of Berlin, in an attempt to find ways and means of mitigating the condition. Later on, as the French pushed their invasion into the Ruhr District with greater vim and vigor, the antiforeign demonstrations became so pronounced that the Mayor of Berlin was forced to appeal to the populace, through the Berlin press, for the abatement of these demonstrations, pointing out to them that the "Ausländer" are the greatest source of revenue to the Government and to the people themselves. Without the foreigners, he stated,

German industry would come to a standstill.

Much of the animosity shown towards the strangers, I admit, can and should be traced to the psychological effect of a lost war upon an overproud people. There was sufficient cause for the Germans to regard every newcomer, especially the citizens of the Allied countries, as a parasite taking advantage of the low "valuta." However, there was no justification for their open and brazen discrimination between the natives and the foreigners. It could not have been a post-war product, since Mark Twain in his "A Tramp Abroad" describes just such practices on the part of German merchants in their dealings with tourists.

In conclusion, I wish to state that, much as I am emphatic about my opinion about the unfriendliness of the Germans, I am fully in accord with Doctor Waddington in his objections to the many lies spread about them. No nation is altogether perfect. The arrogance and the ill will manifested by these people are by-products of German militarism. For centuries have the Hohenzollerns inculcated into the minds of the people that they are superior to all other nations in the world and, as a result we see the intense chauvinism and the "I don't care for others" attitude. Read Gerhard's or (Girard's) book on Germany and listen to the complaints of the better class of Germans themselves about these unpleasant characteristics, and you will be convinced that I, too, have written the whole truth and nothing but the truth.

B. W. Abramson.

Columbus, Ohio.

"THE MEDICAL EDITOR'S ATTITUDE TOWARD THE PRESENT TREND OF EVENTS"

This article (Clinical Medicine, Dec. 1923, p. 886) is a readable review of things as the Editor sees them. He gives due credit to some of the older innovations in medical practice, such as Homeopathy, Eclecticism, Hydrotherapy and Mechanotherapy, and allows a little merit to the Osteopaths. But anything later than that has apparently not been in operation long enough to claim the slightest right to existence. Theoretically, he takes the right stand, "Instead of laying ourselves open to reproach of maintaining a dog-in-the-manger attitude, it would be far more useful to us as a profession to investigate impartially, sincerely and honestly every system of healing that is proposed in good earnest, to determine its possibilities and its limitations." But, practically, Chiropractors "impress people with their deplorable nonsense", while "we need hardly talk about naprapaths, naturopaths, nor even need we mention Rogers' autohemic therapy and Abrams' reduction of all human ailments to three, namely, to cancer, tuberculosis and bovine syphilis. What is good in all of these systems of pretended healing is known to us. The rest is chaff."

Now, Mr. Editor, some of the rest of us would strongly dissent from your last statements. Some of the modern and recent cults mentioned I know nothing about. Others I have investigated to some extent. I recall the time when I was called a quack because I persisted in using electrotherapy, which is now included in the orthodox methods of treatment. But, you exclude the Abrams plan of treatment, which is merely a new and successful way of using electricity. Would it not be better, when we know nothing at all about a particular plan of treatment, to say so, rather than to denounce it as a humbug? We must also distinguish clearly between a plan of treatment and the explanation of the results obtained. A great deal of nonsense has been uttered about every plan, good or bad. Let us become familiar with the facts in each case before making any pronouncement.

T. P. Hall.

Vancouver, Canada.

(At a later date, Doctor Hall writes as follows:)

Concerning Abrams, I agree with all that you say except the first sentence. I went to San Francisco for the sole purpose of investigating Abrams' claims. I am mailing you a copy of my report to the Academy of Science on this subject. It happens that I am familiar with electrical science, and so was better qualified than the average physician to investigate. I have no hesitation in saying that no unbiased, able and competent electrician could truthfully say that Abrams' oscilloclast does not deliver any electric energy. The diagnostic apparatus of Abrams is very simple; the results are wonderful. The oscilloclast is still in its infancy, yet its accomplishments are far beyond what can fairly be referred to suggestion.

It seems to me to be unwise to condemn a method because some of its advocates make illogical or impossible claims, or because absurd theories are offered in support of the method; though I confess to being repelled

from the study of Homeopathy by just such things.

—

[The comment on Doctor Hall's letter, which follows below, had already been written when his later letter just referred to was received. Since Doctor Hall is familiar with electric science, he must be conceded to be qualified as judge. We have, therefore, his statements against that of others regarding the electric energy delivered from the oscilloclast to the patient. As will appear from the comment immediately following, we can not speak from personal knowledge and, therefore, can not claim to have formed other than a tentative opinion. If there be any good in the electronic-medication idea, we hope sincerely that it will be established in the near future. We ourselves insist on having an open mind.]

If Doctor could visit us in the editorial office and sit down here for a chat, he would find that the hats we wear are merely 7½s or at most 7¾s, that there are no symptoms or evidence of swelled head, no pompous, overbearing, "know it all" attitude or anything of the sort. Our friends who know us personally are aware of the fact that we are anxious to maintain an attitude of fairness, even to those whose opinions we do not share and whose claims we do not accept.

We can not see any reason for retracting the sentiment expressed in the quotation (from that article) given by Doctor Hall and which ends with the declaration that "what is good in all of these systems of pretended healing is known to us. The rest is chaff." We are quite aware that there are some good things in naprapathy, in autohemic therapy (not necessarily the Rogers' brand), and in virtually every system of healing advanced outside of the regular one. But, we maintain that, whatever is good in these systems has been borrowed from the medical lore possessed by the medical profession, even though it may not always be employed generally or even understood by all members of the profession.

As to Doctor Hall's objection to any strictures of Abrams' method, we confess that we have no personal *knowledge* on this point and that we can judge only from such information as has come to us. Even here, though, we believe that we have been distinctly fair in this matter. In fact, we have been criticized severely for being too lenient. For our information, we have to depend on that which has come to us from sources in whose integrity we have reason to trust and, after all, what is there unfair or untrue in the statement that the idea of electronic medication requires much further study, that it should be investigated carefully and painstakingly before being advanced with such great pretentions as has been done? Nothing wrong in that, that we can see. We have it on the authority of trained investigators that the oscilloclast, or any other one of the Abrams' apparatus does not deliver a bit of electric energy to the patient. Assuming that this be true, how is it possible to accept the results of this form of treatment as other than suggestive? Dr. Hall claims that this criticism is unfounded. We believe that further investigation will discover the facts of the matter.

We do not condemn treatment by suggestion. We realize its great value. We use it ourselves, quite often. We do not even criticize treatment by suggestion that is not given deliberately as suggestive treatment, under that label. In many cases, it would be folly to tell the patient, I am going to give you treatment by suggestion. The veriest tyro in the healing art would understand that this procedure would at once defeat our object. It is also conceded and, in fact, realized, that impressive apparatus possesses a great power of suggestion and that, through its instrumentality, a beneficial mental effect may be produced with its favorable physical consequences. All that is conceded. However, the particular method of healing for which Doctor Hall breaks a lance is offered for definite physical reasons and with distinct claims of being a physical agency for producing physical good. We can not but think that the claims in favor of this method are overstated, to say the least, that the basic teachings are incorrect and that the method (electronic medication) which is allegedly utilized is far from being well established. In so far as this method is acceptable at all, it still belongs into the domain of the investigator. The practitioner will do well to be patient and to postpone practical interest until the academical questions have been solved. —Ed.]

ANNOUNCEMENT

The Eighth Annual Clinical Session of The American Congress on Internal Medicine will be held in the Amphitheatres, Wards and Laboratories of the various institutions concerned with medical teaching, at St. Louis, Mo., beginning Monday, February 18th, 1924.

Practitioners and laboratory workers interested in the progress of scientific, clinical and research medicine are invited to take advan-

tage of the opportunities afforded by this session.

Address enquiries to the Secretary-General.
Elsworth S. Smith, President,
St. Louis, Mo.
Frank Smithies, Sec'y.-Gen'l.,
1002 N. Dearborn St.,
Chicago, Ill.

REMOVAL NOTICE

Our good old friend, Dr. William F. X. Dierkes, informs us that he has left his former residence in New Kingston, New York, and has moved to Westfield, Massachusetts, (6 Morris St.) where he has again entered the practice of medicine.

We hope that Doctor Dierkes will be very successful in his new field and wish him everything that is good.

UNIQUE PATHOLOGICAL LOCALIZATION

Several articles dealing with unusual development of the tactile sense have recently appeared in the public press.

One very interesting story told of seventeen-year-old Willetta Huggins, of Janesville, Wisconsin, using the telephone by placing her fingers on the receiving diaphragm. Grasping one end of a stick several yards in length, the other resting on the head or against the chest of a speaker, she is able to understand what is said. She can "hear" a person talking through her fingers touching the throat. This is an advancement over the method employed by the famous Helen Keller, who follows the conversation by feeling the movements of the lips. Willetta relies upon the sound vibrations from the larynx. She can also "read" the head lines of the newspapers or any other large print, as well as tell the denomination of paper money. The young lady declares she "feels the ink".

An article in a recent issue of "Popular Science Monthly" briefly recounts some experiments conducted by Dr. Thomas J. Williams, of Chicago, and Professor Robert H. Gault, of the Department of Psychology at Northwestern University.

They found that some persons with normal vision and hearing can learn to "feel" speech. One student has been taught to distinguish five different words by the feel of the sound vibrations on the palm of his hand.

The speaker's voice is carried from a soundproof booth, by a long tube, to a box enclosing the receptor's hand. In order to eliminate the sense of hearing, the subject's ears are plugged and bandaged and the box is carefully muffled.

In recent years, evidence has accumulated tending to show that percussion is a relatively crude method for detecting pathological changes in the viscera and that the educated sense of touch possesses far greater possibilities. This is suggested by Pottenger's researches and discoveries. About a year ago, I discovered that my fingers were much more sensitive than percussion.

Possibly, it will claim your attention to learn that, in experimentation with the refining of the tactile sense, I learned that it is possible to definitely, topographically locate disordered physiology and pathology, though rendered somewhat difficult in hairy regions.

The technic is simple, and the sense of touch develops, with use, to a surprising degree. What complimentary friends have termed *"The Carter Surface Sign"* has been demonstrated many times here in Baltimore and New York, where I have taught a number of physicians how to elicit the *"sign"*.

At first, the beginner may check his findings by the patient, for the patient or subject can also feel the reflex, reaction, or sign, when it is positive. Follow these suggestions and try it yourself—not once or twice, but many times, and on a number of different people. You will find some cases extremely sensitive, while others have to be taught to recognize any change.

For instance: A case of gastrointestinal disorder in a female, fair, fat, forty. You suspect the gall-bladder.

The patient, having removed the outer clothing and corsets, lies upon the examination table. She is instructed to extend the arms slightly from the body and to fully open the fingers, thumbs pointing away from the body. The examiner then lightly, but not too delicately, draws his fingers over the region of the gall-bladder, carefully noting the feel of the skin and the resistance or drag to the fingers. The patient should be told to note the sensation produced.

Next, have the patient close the fingers, "make a fist", or the examiner may "short-circuit or join both sides of the body by placing one or two fingers of one hand on each side of the median line. With the other hand again note the feel and drag of the skin over the gall-bladder. If the fingers slip with less resistance and without the "wet rubber" feel-

ing you have "short-circuited" a positive sign indicating gall-bladder involvement.

This procedure may be reversed and the change from "smooth to rough" found when a reaction is present. This same "smooth-rough" phenomenon is perceptible to the patient also. Check your findings by asking the patient if any change in the sensation produced by the fingers is felt under the different circumstances. Some people will tell you the reaction makes their skin "feel like sandpaper".

Pathology anywhere in the body may be located on the surface in this manner.

It is not necessary for the patient to face in a particular direction, but the *"sign"* is more pronounced if the patient is facing the west when standing or sitting, or the feet directed westward when recumbent. Remember that, if the feet, legs, or arms are crossed and if the fingers are not pointing away from the body, the patient is "shorted", dissipating the *"sign"*. This will also occur, should the head be turned.

The characteristic "wet rubber", "negative pole" feel of the skin, indicating a positive *"sign"*, needs but little practice to become easily recognizable. At first always "short" to note the change.

The presence of this *"surface sign"* may be explained by students of the sympathetic nervous system. Head, Mackenzie, Pottenger, and others, have pointed out the frequent hyperalgesia of the skin in diseases of the viscera. In some cases of pulmonary tuberculosis and pleurisy, a very light touch on the skin causes exquisite pain. This has been termed the viscerosensory reflex. The nervous mechanism involved in producing the *"sign"* undoubtedly follows much the same pathway. However, that there is a vasomotor change, is evidenced by briskly but lightly rubbing, with raw cotton or wool, the skin over the pathologic area. This brings out a "pathogram" startlingly distinct on some patients. This "pathogram" shows as a white, very slightly raised area.

Pressure with the finger tips will, in many patients, enable the examiner to discover small, shot-like nodes under the skin, in the same area. These, too, will disappear upon "shorting".

Another extremely interesting phase of this method of localization is made manifest to the patient by pressing a little heavier than before. This additional pressure on the underlying, muscular tissue reveals a varying amount of tenderness. This tenderness will also be practically dissipated by "shorting". Please understand, I am not referring to the tenderness usually looked for. This does not refer to the deep sensitiveness as over the gall-bladder, appendix, ovaries, etc. It seems to lie in the body wall itself, and to be markedly influenced as I have indicated.

Further attempts to explain the outlined phenomena would lead us into an extensive study of the physiology of the nervous system, as well as what has been called the "electropathology" of disease. My object is, to present to you a physiological discovery I made, partly by accident; and to ask you to try out the technic I use and suggest.

I shall appreciate hearing from those who experiment further with the development of the sense of touch as applied, especially, in the diagnosis and treatment of disease.

HEDLEY V. CARTER.

Baltimore, Md.

FAVORITE METHODS

Your request for "kinks," in the November issue, calls forth the following: How is one to know just what are "kinks" and "tricks of the trade"? So many things that we do are matters of personal habit, daily routine, or individual preference, that it is hard to collect these ideas together, with the object in view, that they may appear to the other fellow as "kinks." [The editorial in question mentioned "stunts," not "kinks."—ED.]

Take for example Dr. Ochsner's own article, with reference to "Unna's paint" in varicose conditions. Before reading the article, I anticipated a "kink." After reading it, I realized that it was nothing but a description of the use of a gelatine cast, which topic I had heard amply discussed several years ago, at a medical society meeting.

This brings one to the point of asking: When will the medical profession cease using vague, nondescript terms for drugs, diseases, and processes, instead of more accurate, intelligible, and descriptive terms. So much for that. The question is; what are "kinks." However, I submit some of my own pet preferences.

Burns:—I have never used, nor have I ever seen complete satisfactory results from the so-called melted-wax preparations. I always have used the plainer and more simply applied, plain or medicated (hydrocarbon base) preparations, such as plain vaseline or calendula cerate.

Since the advent of the proprietary "Dionol", I have pinned my faith to it. It has never dis-

appointed me. To me, it seems the most perfect dressing yet presented to the profession for burns.

Warts:—I use a local application of the tincture of Thuja Occidentalis, applied once or twice a day; recommending in some instances that the application be, so to speak, lightly tattooed into the surface of the wart with a fine sharp needle. This method may require a little extra time to get results, but it is surely the least inconvenient, least painful, and most pleasing in the end.

Corns and callus: Simply recommend the wearing of ordinary zinc-oxide adhesive plaster as a protection, and the affliction will leave of its own accord.

Put on a fresh dressing just as often as the old one becomes soiled; weeks if needed.

Conjunctivitis:—Ordinary, nonspecific. Here, again, I use a proprietary: A solution of "Kollesole," formerly "Pix Cresol." A solution of suitable strength can be instilled into the eye every half hour or so, until the inflammation yields to its beneficial effect.

Influenza:—The majority of influenza patients present an aspect of that condition commonly harped on today as "acidosis." Whenever this condition shows itself, I rely on Abbot's Calcalith, as a suitable alkalinizer. It is pleasing to watch that tongue clear up under its use.

Varicose conditions:—Don't forget to consider the use of Pulsatilla and of Echinacea compounds, internally; regardless of other procedures.

Boils and furuncles:—I adhere to the old-fashioned flaxseed poultice, with this little "kink" added: Put 10 to 20 drops of pure "Ichthyol" in the center of the poultice, and apply this directly to the focus of the boil.

Tincture of Iodine:—This I get made up to suit myself, simply by dissolving iodine in an aqueous solution of potassium iodide. No alcohol is used at all. The 7%-solution is what I use. It smarts less than alcoholic solutions when applied to open wounds. This relieves the patient of some of his anxiety, when it comes to making local applications to tender spots. He will thank you.

Urotropin, or Hexamethylenamine:—Whenever I want a little heat to boil a spoonful of water, or sterilize a hypodermic needle, I place a urotropin tablet on some hard substance and light it with a match. It burns with an alcohol-like flame and does not smoke nor does it leave any ash. Urotropin tablets are handy little heaters for you.

The Hypodermic syringe:—There is just a little technical point in the use of the hypodermic needle, worth noting. After the needle is plunged to the shoulder, slightly withdraw it about ⅛ to ¼ of an inch before pushing down the piston.

Eruptive fevers:—The mother is advised to anoint the skin of the patient once or twice a day with one of the greaseless, socalled lubricating jellies. It affords considerable comfort to the little sufferers.

If these look like "kinks," they are herewith submitted at their face value.

DR. F. N. RICHARDSON.

Cleveland, Ohio.

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[On the "face" of it, these "kinks" (stunts!) appear to be very useful. Some of them we know to be good, from personal experience. The others we intend to test on the first opportunity that offers.—ED.]

ALCOHOL AS MEDICINE

I have been a reader of your valuable journal since its foundation and consider it a valuable help in my practice, but am very sorry and shocked to read in your editorial, on page 922, that you "consider the action of Congress in this respect reprehensible," when speaking of the Volstead Act.

I graduated at Northwestern University in 1888, was taught by the venerable Dr. N. S. Davis and others not to prescribe intoxicating liquors in the practice of medicine and have never done so. Congress and the people of this great nation have decided that the world has been drunk long enough, that a new era must begin and that no alcohol is needed in the human system either as a therapeutic agent or a beverage.

The time may come in an advanced civilization when people will say "Did they really license saloons and drink alcohol as a beverage?"

W. L. WARRINER.

Topeka, Kan.

—

[The editorial remark to which Doctor Warriner takes exception was evidently not fully understood by him. This editorial writer differentiated clearly between the Eighteenth Amendment and its interpretation known as the Volstead Act. The Eighteenth Amendment is a splendid thing and we trust sincerely that it will never be repealed. The Volstead Act, in this writer's personal and individual opinion, is bad and should be replaced by one that can be enforced, that would

offer a more practical and practicable solution of the problem (which is extremely difficult at best) and which would cause the Eighteenth Amendment to be accepted in truth by the overwhelming majority of all decent citizens of this country.

Even though the late Dr. N. S. Davis objected strongly to the prescribing of intoxicants as remedial agents, and despite the fact that a great many other physicians of note agree with him, it is, nevertheless, true that other clinicians and therapeutists of equal scientific standing and attainments have gone on record distinctly to the effect that, in certain conditions, whisky or brandy of good quality offer the best available means (when they are available) to tide the patient over a very serious time. That does not mean that alcoholics should be prescribed habitually or indiscriminately. The honest physician quite realizes the necessity of caution and, indeed, in those cases where its use might lead to addiction, it is rarely indicated. Where it is actually indicated as a life saver, the question of habit-formation can hardly enter and is negligible. In like manner, there are certain infrequent (fortunately) occasions when opiates are absolutely demanded and when it would be a crime (please remember, we give our personal and individual opinion) to withhold it for fear of the remotely possible habit-formation.

The argument that the prescribing of a certain remedy might have remote deleterious consequences is not a good one, in this editorial writer's opinion. It may lead to very serious consequences, because it may be instrumental in depriving the patient of means that might improve his chances of recovery, or that might lessen his distress and pain.

From the physician's viewpoint, the question whether "the world has been drunk long enough" does not enter in the medicinal use of alcoholics. It is to be noted that this expression, "medicinal use of alcoholics," is frequently abused or used loosely. While we personally have not prescribed whisky or brandy in years, and formerly prescribed them extremely rarely, we do not wish to deprive those physicians who are convinced of their necessity of any benefit that they might secure for their patients. We can not admit that the prescribing of intoxicants is all but malpractice. Too many prominent people and honest physicians have recorded their opinions in favor of these remedial agents than that we could take such an extreme position.

Please do not misunderstand. We are not in favor of drunkenness! We are convinced that, ordinarily, we have remedies that make the prescribing of alcoholics quite unnecessary. However, we must concede to those honest physicians, who believe that they must prescribe these remedies at certain times, the right to do so. We can not see any wrong in it, certainly not an instance of malpractice.

Do not let us cloud the issue by confounding the use of intoxicants as therapeutic agents with their use as beverages. The two are not identical and should not be considered so.—Ed.]

DISCUSSION OF CASES

My study of the interesting case described by Dr. J. R. Sturre in the November (page 282) number of the Journal, leads me to differ from the diagnosis of the neurologist, in whose opinion this man had encephalitis lethargica, and to incline to the view of Doctor Sturre that, in the first place, at any rate, he had to do with a cerebral concussion following the trauma to the head.

The fall and the injury to the skull caused more than merely concussion. There was some laceration of brain substance, with slight hemorrhage or, at all events, injury to some cerebral blood vessels, resulting in thrombosis. Lues may or may not have been a predisposing factor. All the symptoms and signs enumerated in their gradual development can be explained on the assumption of cerebral-softening, thrombosis of some branch of the middle cerebral artery on the left side. Let us recall them. At first, vomiting, slow pulse, practically normal temperature and respiration, unconsciousness, dilated pupils, spastic muscles, involuntary bowel movements, followed, as the days go by, by restlessness, aphasia, change in superficial and deep reflexes, mental dullness, increasing coma, bloody spinal fluid, increasing pulse rate and rising temperature, with a positive Wassermann reaction. These symptoms might all be expected in cerebral thrombosis, and we know that, in this condition, the spirochæta pallida plays an important role.

Geo. Acheson.

Kingston, N. B., Canada.

In reply to Dr. McMahan's query, on page 901, December Number of The American Journal of Clinical Medicine, I would say that it seems to me that this is a case of dysfunction of the endocrine glands. The asthenia would seem to indicate a minus function

of the suprarenal glands, a hypoadrenia. The epileptoid seizures point to a minus function of the parathyroids. It is probable that the too rapid heart action is due to a plus, or over-action, of the thyroids. The hypoadrenia was probably induced by the shock caused by the death of the husband of the woman, two years ago. The other disturbances were probably due to sympathy with the adrenals.

G. H. FRENCH.

Herrin, Ill.

You have asked for an expression of opinion on the case reported by Dr. J. S. McMahan in the December issue (p. 901).

One cannot very well get away from the idea that these are epileptic attacks, of the *petit mal* variety, notwithstanding the age of the patient. But, this is only half a diagnosis. Why these irregularly occurring epileptoid symptoms? Simple epilepsy, (by which I mean epilepsy without any apparent organic cause), coming on after adult age, is of very rare occurrence. Still, if the history and careful examination of this case disclose no trauma, gross brain lesion, vascular or renal disease, or syphilis, we must, I think, look upon it as true epilepsy, with the exciting cause of the seizures to be found in some obscure peripheral nerve irritation, reacting on a central nervous system in a state of unstable equilibrium, brought about by worry over the death of her husband.

Such, at any rate, is my tentative diagnosis.

GEO. ACHESON.

Kingston, King's Co., N. B.

[These two discussions of the problem submitted by Doctor McMahan are the only replies that have been submitted, and it is evident that our readers do not care for a Medical Seminar, such as was suggested in the editorial comment to Doctor McMahan's article. It is rather a pity that this case history has not appealed to more of our readers, because it is not without interest. We hope, however, to receive some further discussions and shall withhold our own comments on the problem until next month.—ED.]

THE ABRAMS CRAZE

Apropos of the letter from you, some time ago, concerning the Abrams craze, I have just witnessed a very interesting trial at law in the district court in the city of Los Angeles.

A man by the name Calder became enthused about the Abrams plan and took his entire family to have them diagnosed. He was told that they all had congenital syphilis and commenced taking treatment to offset the electron vibrations of that disease. Later, he lost faith in the treatments and refused to pay the doctor's bill of some three hundred dollars. He was sued and the defense was, that the Abrams diagnosis and treatment was a fraud.

Prof. R. A. Milikan, who has recently received the Noble prize for his research in the electron field, was called as an expert witness and made a careful examination of the electron machine used by Abrams and told the court and jury that the claim of differentiating electron vibration by the Abrams machine was absolutely unscientific and not possible. The claim that syphilis vibrations were 490 to the second was a fiction, as the true rate of vibration of any electron thus discovered is many million times per second, and no machine can possibly record such infinite motion.

The jury found for the defendant and thus adjudged the Abrams whole scheme a fraud and a fad.

You may not remember the "Perkins Tractor" of some ninety years ago. It had just as many enthusiastic believers as the Abrams scheme has today. Abrams is the same man who was denied the U. S. mails to push his tuberculosis cure from Fort Worth, Texas.

A. D. HARD.

Long Beach, Cal.

ANOTHER PHASE OF THE CANCER PROBLEM

A number of years ago, I had an epithelioma develop on the lower eyelid of the left eye and had it operated on in St. Louis. In a few years, it returned and again the knife was resorted to. The third time, arsenic paste was used, but another developed beyond the outer canthus. Becoming satisfied, about four years ago, that the trouble was not so much with the skin as with metabolism and that, probably, some of the guanidin group of amino-acids was not destroyed, I quit eating meat and at once my epithelioma began to disappear. In a short time, it was entirely gone. This condition remained till some time last summer, when a scar from an injury on the right cheek began to break down and suppurate, developing a typical epithelioma. Chlorazene and zinc sulphate did not check its progress.

At this time, I began again to cogitate as to

Dr. J. S. McMahan's children. Wouldn't we enjoy having them here for a visit!

where the real cause might be, and concluded that the calcium metabolism might be at fault. So, I began taking parathyroid, 1/10 grain three times a day. At once, the sore stopped spreading and a dry scab began to form, under which healing took place. In the course of a month, the lesion was healed and it has shown no signs of returning. The only external application was a little zinc sulphate on the outside of the scab, once a day.

In this case, I knew that carbon dioxide snow would remove the tumor, but, as with the knife in the other instances, I knew that it would not remove the cause. No tests were made of the blood for calcium percent, but, from the results, it is evident that this was low. My suggestion is, that, in cases of skin tumors, it would be well to make the calcium test, either with the blood or by the use of parathyroid extract.

G. H. FRENCH.

Herrin, Illinois.

[*Concluded from page 119*]

and a snare. If we have been properly taught, if we have conscientiously applied those teachings, we KNOW what we are doing and no man can take that Faith away from us. Having Faith in that which we have proven, retaining an open mind (without being gullible) for the acceptance of new TRUTHS and applying these carefully, we shall be able to serve the sick successful, avoid Bunking those who could be Bunked (ourselves included) and live and work well within the limit of our oath.

It is Bunk to say, the physician should commercialize his service. Medicine can never be commercialized—it should not be "machined" [standardized?—ED.] either. The doctor requires—indeed must have—proper remuneration. But, he alone, searching his conscience, knows how much remuneration he may fairly ask from the individual. He alone must fight the fight at the bedside and he alone can judge what his fee should be. Treating the sick and selling bananas are two separate and distinct avocations. If the banana ventor asks too high a price, the would-be purchaser can say, "Yes, I take no bananas today." But, the poor man with pneumonia or the child with measles must have attention—the same attention that the rich patient would receive (as far as medical skill goes, at least), and the practician who differentiates is a worshipper of the great God BUNK: he professes one thing and practices another.

The physician must, above all things, be a *gentleman*, and a gentleman is trustworthy and has ideals. Those who would destroy these are first cousins to the ecclesiastical Bunk-shooters and should be treated with contumely.

"All Bunk!" someone will say. All right, but examination will prove every statement to be the *beneficent* variety. Shoot *that* only and you'll get along all right.

[*Concluded from page 112*]

by the woman physician, will be discussed in a later issue. Without giving additional data, I cannot expect the readers to present a satisfactory diagnosis.

I present this case for the following requirements:

1.—Wherein did the woman physician err, since err she did, as is shown by her therapeutic failure?

2.—What class of affections should have been had in mind at the first consultation?

What Others are Doing

NEUTRAL ACRIFLAVINE

The flavine series, of which trypaflavine, or acriflavine, is the most important, was discovered about the time when Ehrlich was experimenting with the arsenobenzol compounds. The flavines were found especially useful for war wounds and acriflavine showed practically all the necessary qualifications for an antiseptic, except that it was slightly irritating, due to its acidity. This disadvantage was obviated by the production of a neutral compound with the same antiseptic qualities: neutral acriflavine. Speaking of neutral acriflavine, Arnott A. Moore *(Dental Cosmos,* Sept., 1923, p. 984) reminds us that neutral acriflavine is 3-6-diamino-10-methylchloracridine. As it is somewhat light-sensitive, solutions of 1 percent and over may be kept for two weeks, while diluted solutions should be made fresh, at least every other day. All solutions should be kept away from light as much as possible, in brown, tightly-stoppered bottles.

From the viewpoint of the dentist and oral surgeon, neutral acriflavine is valuable, since it can be absolutely depended upon to kill any mouth cocci and because it is easy to handle. It is indicated where a general antiseptic is desired and may be used in the mouth in 1:1000 solution with perfect freedom. It may be swallowed without harm to the patient, or injected intravenously or intramuscularly.

Neutral acriflavine has been used with great success in the treatment of pyorrhea. It has been found useful also in some cases of Vincent's infection, although here the action was not uniform.

The dye is invaluable for use in wounds, either open or closed. If necessary, it can be used in 1:1000 solution every three hours, although this is very seldom the case, excepting in fracture cases where there is a great deal of infection present. The blunt-needle technic is very valuable here as in cases of pyorrhea. It is suggested that the operator use it once or twice a day with the needle and every three hours as a mouthwash. Very few infected fractures will continue to suppurate after the third or fourth day. The dye can be used freely in cysts, abscesses, sinuses and cancer cases where a mild, non-irritating and highly efficient antiseptic is desired.

Dr. Moore declares that, in cases of severe infection, the patient may drink about 500 Cc. of the 1:1000 solution every twenty-four hours, as the dye is taken into the blood stream as neutral acriflavine and is eliminated in the urine as such. This is a very important point and should be very much emphasized. In addition to its value as a general antiseptic, the whole mouth, throat and intestinal tract are temporarily freed, to a great extent, of the organisms always present. This is most valuable during an infection where the patient has a very much lowered resistance, allowing concentration of the powers of resistance on the particular infection which we are treating.

If we feel we must go even further to prevent a general infection and wish to have much more marked results from the local application of the drug, we may inject it intravenously. It is recommended that this injection be given by a physician. The same applies to an intramuscular injection.

TOXIC EFFECTS FROM MAGNESIUM SULPHATE

Dr. Hugo Muench (*Jour. A. M. A.,* Jan. 5, 1924, p. 33) reports on the case of a colored girl, age six years, in Surinam, who received, April 5, 1923, her fourth treatment of 6 minims of oil of chenopodium. No ill effects had resulted from any of the three previous treatments. On the night preceding the fourth treatment, the child received the customary preliminary dose of magnesium sulphate which apparently acted satisfactorily. After treatment, she received another dose of the purge. This, it seems, was vomited some time later. At 4 p. m., on the day of treatment, it was reported that the child's bowels had not moved and the nurse administered a third dose of magnesium sulphate. At 7 p. m., the child became ill, complaining of pain in the abdomen. Shortly afterward, she became comatose with periods of confusion. The bladder was found full of urine which was emptied by pressure. A soapsuds enema was retained al-

most entirely. The bowels had not moved.

The condition of shock was treated with digitalis and camphor. A high enema, to which had been added a small amount of magnesium sulphate, produced a little action, after which the patient improved slightly. Further treatment consisted mainly of camphorated oil and hot applications. In course of time, the bowels moved, the distended abdomen softened and regular bowel action was established. The child recovered, leaving the hospital on the sixth day.

It is to be noted that the solution of magnesium sulphate, which is administered routinely prior to the chenopodium, holds 25 percent of the salt, the full dose being 125 Cc. That means that this little six-year-old girl received a little over 1 ounce of Epsom salt with each dose. Not only was this an overlarge dose for a child, but it was administered in strong concentration, owing to which (in the absence of edema, ascites or other waterlogged conditions of the tissues) a toxic effect occurred almost of necessity. This manifests itself usually in gastric irritation and vomiting. It may produce oliguria, hematuria, slow respiration, paralysis of the intestines, extreme weakness and collapse. Since the drug is largely excreted by the kidneys, these will suffer severely in their endeavor to eliminate the poison.

It goes without saying that the administration of chenopodium was merely incidental and had nothing to do with the poisoning. These symptoms were related entirely to the excess of magnesium sulphate that had been given in insufficient solution.

GOITER AND TUBERCULOSIS

It is quite understood that the function of the thyroid gland concerns not only its directing influence on the metabolic processes but that it also has to do with the powers of the body to resist disease. The thyroid function is intimately associated with the production of antibacterial immunity and it has been shown to be the most important of the numerous detoxicating agencies which work in the body.

While, not so very long ago, the thyroid gland was believed to be not susceptible to tuberculosis infection, it has been realized more recently, say, in the last ten or fifteen years, that t.-b. infection of the thyroid gland occurs with reasonable frequency, that it is resisted strongly through increased activity of the gland and that this may give rise to a compensatory enlargement of its substance. This probably is the explanation why, long ago, it was believed that people with goiter were protected against consumption.

One of the functions of the thyroid gland is, to restrict the mobilization of the carbohydrates and to lessen the calcium and magnesium metabolism. Since, in tuberculosis, the mineral metabolism is prone to be enhanced, leading to a demineralization of the organism, the restrictive influence of the thyroid gland must be recognized as valuable.

In discussing this question, Hermann Hoffmann (*Münch. Med. Woch.*, Nov. 9, 1923, p. 1363) says that the existence of a goiter is of importance not so much with regard to its size but rather with a regard to the functioning power of the gland. He believes that an increase in the thyroid gland is many times an expression of systemic resistance against a t.-b. infection and that this is one of the agencies through which the development of tuberculous disease is arrested. Occasionally, he holds, goiter is an early symptom of glandular tuberculosis which can not yet be recognized clinically.

These views relating to the function of the thyroid gland with reference to tuberculosis infection receive weight by the observation that operation for goiter is followed by pulmonary tuberculosis in a considerable number of cases. Doctor Hoffmann relates several histories in point. This is an occurrence the possibility of which should be kept in mind when considering the surgical treatment of goiter. The mechanism that is active here could be explained in this manner: that an agency that prevents an existing t.-b. infection (perhaps inactive, dormant) from progressing, namely, the enlarged thyroid gland, is eliminated through goiter operation and, with the removal of the inihibition, the infectious disease can develop promptly.

Doctor Hoffmann summarizes his views concerning the relation between goiter and tuberculosis as follows:

1.—The development of goiter is usually a defensive measure of the body against active tuberculosis.

2.—In view of this fact, surgical treatment of goiter should be avoided. Any therapeutic measures should be specific; for instance, tuberculin treatment.

3.—Goiter operation in general is to be discouraged. It should be done only in case of need; that is, only when the persistence of the goiter constitutes a danger to life.

Among the Books

ABT: "PEDIATRICS"

Pediatrics. By Various Authors. Edited by Isaac A. Abt, M.D. In eight octavo volumes totaling 8000 pages with 1500 illustrations, and separate Desk Index Volume, free. Philadelphia & London: W. B. Saunders Company. 1923. Cloth $10.00 per volume. Sold by subscription.

At present, Volumes 1 and 2 of this remarkable undertaking are ready. Volume 1 contains descriptions on the history of pediatrics; heredity; anatomy of child, growth and development, metabolism, physiology and hygiene. In Volume 2, we find information on mortalities of infancy, diagnosis and examination, treatment and prophylaxis, newborn and premature, milk and feeding, disorders of metabolism, food deficiency diseases, constitutional diatheses.

This system of pediatrics, we are informed, is a collection of monographic treatises on subjects of interest in the diseases of infancy and childhood. It has been long in the making, since preparations for the publication of the work were made early in 1914. The war interfered. Since its close, much of the material had to be rewritten and all has been brought up-to-date.

Older physicians will remember Keating's "Encyclopedia on Children" which appeared in 1889, since which time no other treatise or collection of treatises on pediatrics has appeared that equalled this present work in the ambition of scope and the extent of ground covered. Of course, there were numerous textbooks on the subject, from Jacobi's and Thomas Rotch's down to the most recent ones. There are several "systems" of pediatrics that have appeared in the German and French languages. Since the study of diseases of children has made such great progress in our country, it is fit that one of the most beautiful encyclopedic works on the subject should come out on this continent.

We are informed that, since the publication of Keating's collection of essays, many changes and advances have occurred in medical knowledge and it has been believed timely to collect in monographic form the material which represents the fundamental knowledge of pediatrics. Such a collection of essays, Doctor Abt, the editor of the work, believes, should be of value not only because of the known facts which are presented, but also because it will serve to indicate gaps in our knowledge and because it will stimulate clinical and research work, especially by the younger men of English-speaking countries.

"In addition to the discussion of the internal diseases of children, subjects of surgical interest have been introduced, because, after all, a child who is sick may require medical or surgical treatment or both, and a well-trained physician not only desires but is compelled to know when surgical treatment is indicated and the manner of its application. The medical attendant may not himself be a trained surgical technician, but it is important that he should recognize surgical conditions and seek surgical advice when it is required. Surgery of childhood differs somewhat from that of adults, since conditions arise in infants and young children which do not occur or which are rare in later life* and there are points of difference in surgical anatomy, surgical pathology, and surgical technic, as well as in surgical diagnosis, which are emphasized by the contributors to these books."

Although pediatrics, as a specialty, was not established until our own time (in America, especially, through the agency of the late Dr. A. Jacobi and others), it is interesting to note, in a historical review of encyclopedias which refer to the diseases of children (p. VII) that, as long ago as 1773, a collection of interesting treatises was published in Leipzig which gave in detail some of the clinical disorders of infancy and childhood. Since then, a number of similar publications have been available, especially in the German and French languages. The historical student will be attracted also by the history of pediatrics which is contributed by Dr. Fielding H. Garrison and written in the thorough and scholarly style to which we are accustomed in that accomplished medical historian. We had missed, in Doctor Abt's essay on encyclopedias, reference to the

*Compare S. W. Kelley: "The Child, His Doctor, and His Surgeon", CLINICAL MEDICINE, January, 1924, p. 41.

great work on children's diseases, by Rillet and Barthez, which comprises three large volumes. However, as Garrison mentions this work as a "textbook," the Reviewer's *penchant* for criticism can not be indulged in this instance.

We have already indicated the contents of the first two volumes. They promise well. The several monographs have been prepared by authors who are the outstanding authorities on the subjects treated by them. To the pediatrists, this work is indispensable. To the general practitioner, with his never-ceasing work among the little ones, it will afford so much splendid information as to make the investment an eminently paying and satisfactory one.

DORLAND'S MEDICAL DICTIONARY

The American Illustrated Medical Dictionary. A new and complete dictionary of the terms used in medicine, surgery, dentistry, pharmacy, chemistry, nursing, veterinary science, biology, medical biagraphy, etc., with the Pronunciation, Derivation, and Definition, including much collateral information of an Encyclopedic Character. By W. A. Newman Dorland, A.M., M.D. Twelfth Edition, Revised and Enlarged. Philadelphia: W. B. Saunders Company. 1923. Price $7.00.

The Reviewer once read of a boy on the farm (it was in the olden days, before modern inventions had brought city comforts and conveniences to the farm) who, for lack of reading matter, resorted to "Webster's Unabridged" and accumulated a vast amount of heterogenous and unassorted information by its diligent study. Something similar might be the result of using Dorland's Medical Dictionary for leisure reading. Still, even the information secured from a dictionary, and without any other help, can become very useful and extensive if correlated rightly and if followed through the various cross references that are always given.

A new edition of "Dorland" merely adds new good things to something very excellent on which we have been accustomed for years to depend. We are told that the twelfth edition (which is by no means only the twelfth printing) has been increased in size by sixty-nine pages, an equivalent of over three thousand words. It is of advantage that this dictionary includes the terms used not only in medicine and surgery but also in the allied sciences, dentistry, pharmacy, chemistry, nursing, veterinary science, biology, medical biography, etc. The treatment of the substance matter makes it truly an encycopledic dictionary.

We note with pleasure that some terms, that are frequently used incorrectly, have been assigned their proper places. For instance, the correct expression "sanatorium" is now defined, while the incorrect "sanitarium" is relegated to the background where it belongs. The terms "tubercular" and "tuberculous" have been described in their exact, correct meanings. These are just a few of the instances that were looked up.

Under "tests," we miss the antiformin test for tubercle bacilli. However, in defining "antiformin," the author mentions that the substance is used in isolating these capsule-bearing organisms.

The possession of Dorland's Medical Dictionary is a source of great comfort and satisfaction. The definitions can be depended upon, the pronunciation is indicated acceptably and the etymological notes are instructive. We also like the historical and biographical facts or data that are found here and there. Altogether, we have long resorted to Dorland's as a matter of daily custom, although, at times, we compare this authority with others. Dorland's Medical Dictionary is one of the distinctly worth-while investments.

GROSS: "BLOOD SUPPLY TO HEART"

The Blood Supply to the Heart in its Anatomical and Clinical Aspects. By Louis Gross, M.D., C.M. With an Introduction by Horst Oertel. Illustrated. New York: Paul B. Hoeber. 1921. Price $5.00.

This is a beautifully printed and wonderfully illustrated book on the subject indicated, which is the result of years of devoted work. In addition to the studies of the blood supply to ventricles and auricles, to neuromuscular tissue, to heart valves, etc., there is also a chapter describing the age period changes in the blood supply to the heart and their pathogenic relations.

HEATHERLEY: "HEART DISEASE"

Modern Methods in the Diagnosis and Treatment of Heart Disease. By Francis Heatherley, M.B., B.S. New York: William Wood and Company. 1923. Price $2.00.

This little book is dedicated to those who find salvation in compensatory hypertrophy and who fear a well-conducted mitral. It contains a short, clear sketch of the present state of knowledge regarding heart disease as it might prove useful to the general practitioner. For this much, thanks. To the un-

initiated, modern cardiology is rather an alarming matter, and an attempt to interpret casual cardiographs makes one feel keenly the want of special training. All the more reason why a book like the present one is to be welcomed, since it puts us in touch with the modern methods of studying heart disease.

SMITH: "HEART RECORDS"

Heart Records. Their Interpretation and Preparation. By S. Calvin Smith, M.S., M.D. Illustrated. Philadelphia: F. A. Davis Company. 1923. $7.00.

While graphic records of the heart action possess great value for the detailed study of circulatory disease, the method, fortunately, is not one that is indispensable for good work on the part of the clinician. The study of the heart, whether in health or in disease, by means of graphic records, is possible only to few, and it is fortunate that the author of this interesting book attributes to them their true place when he says that "heart records can only supplement, they can never supplant, the painstaking clinical examinations of today which have evolved from the careful observations of generations past." To those physicians who have the opportunity for making heart records, Doctor Smith's book will offer a very acceptable guide.

MYERS: "ANALYSIS OF BLOOD"

Practical Chemical Analysis of Blood. A Book Designed as a Brief Survey of This Subject for Physicians and Laboratory Workers. By Victor Caryl Myers, M.A., Ph.D. Illustrated. St. Louis: C. V. Mosby Company. 1921. Price $3.00.

We are informed that the contents of this book are reprinted largely from articles which have appeared, in the year preceding publication, in the *Journal of Laboratory and Clinical Medicine*, under the title of "Chemical Changes in the Blood in Disease." The chemical study of the blood in disease has recently assumed great importance; a reliable guide supplementing the few already in existence will prove acceptable.

FISCHER: "HEALTH-CARE OF THE BABY"

The Health-Care of the Baby. A Handbook for Mothers and Nurses. By Louis Fischer, M.D. Thirteenth Edition, Completely Revised. New York: Funk & Wagnalls Company. 1922. Price $1.00.

The thirteenth edition of any book can properly be announced almost without discussion. It proves that the book is acceptable and well received. The present edition contains numerous additions which increase the value of the work.

STEWART: "DIATHERMY IN PNEUMONIA"

Diathermy and Its Application to Pneumonia. By Harry Eaton Stewart, M.D. Illustrated. New York: Paul B. Hoeber, Inc. 1923. Price $3.00.

A book from Doctor Stewart on a subject in which he is so eminent, is attractive in itself. The fact that the author has been enabled to obtain good results from diathermy in the treatment of acute lobar pneumonia is a further reason why his book should be studied diligently. Doctor Stewart's experiences appear to be so encouraging as to merit further investigation. Moreover, he is conservative in his estimation and draws only conclusions that are carefully guarded. Still, so many wonderful things have been accomplished by means of diathermy that we shall not be astonished if this method is successful in lobar pneumonia also.

d'HERELLE: "THE BACTERIOPHAGE"

The Bacteriophage. Its Role in Immunity. By F. d'Herelle. Authorized Translation by George H. Smith, Ph.D. English Edition. Baltimore: Williams & Wilkins Co. 1922. Price $4.00.

A few years ago, a French savant, Dr. F. d'Herelle, of the Pasteur Institute, in Paris, discovered a phenomenon occurring mainly in the intestines of persons suffering from infectious disease. It consists in the destruction, by lysis, of the intestinal bacteria and was attributed by d'Herelle to a minute living entity which he called *bacteriophagum intestinale*, leaving the question open whether this lytic principle, which acts as a virus, is a bacterium (and perhaps an ultramicrobe), a protozoon, a yeast, or what not. Since 1917, when d'Herelle published his first observations on the subject, much interesting work has been done by him and others, and the present volume contains a report of the work accomplished by d'Herelle and his associates. It seems that the bacteriophage is an ultramicrobial parasite of bacteria* which normally exists in the intestinal tracts of animals, both vertebrates and invertebrates. The bacterio-

*Surely, an extreme application of the idea:
"Great fleas have little fleas upon their backs to bite them
"And little fleas have lesser fleas, and so *ad infinitum*."

phage lives only at the expense of living normal bacteria which constitute its sole culture medium. It utilizes the substance of the bacteria which it dissolves by the aid of the lytic diastases which it secretes. This bacteriophage plays a distinct role in the development of individual immunity to bacterial infection which is, however, too complicated a problem to discuss in the brief limitations of a book review. To the student of immunity, the subject naturally is of great interest.

BROWN: "PULMONARY TUBERCULOSIS"

Rules for Recovery from Pulmonary Tuberculosis. A Layman's Handbook of Treatment. By Lawrason Brown, M.D. Fourth Edition, Thoroughly Revised. Philadelphia and New York: Lea & Febiger. 1923. Price $1.50.

Doctor Brown's "Rules for Recovery from Pulmonary Tuberculosis" has been reviewed before. It is one of those books written in popular language and for the patient that are exceedingly helpful, not solely because of the good advice that they contain but also for the encouragement and the psychic stimulation that they offer to the patient. We congratulate the author on the evidence of the high estimation in which his little book is held and which is demonstrated by the fact that a fourth edition has already been called for. This is a proof of its excellence.

MEDICAL RECORD VISITING LIST

William Wood and Company, New York City, have sent us a copy of the Medical Record Visiting List or Physicians' Diary for 1924, revised. It is one of the old-style books, handy for the pocket, bound nicely, supplied with pencil and the customary ancillary information. The bulk of the book is occupied by blank pages for the visiting list covering sixty patients a week.

"THE ENDOCRINE SURVEY"

The Endocrine Survey is published by The Survey Publishing Co., Glendale, Calif., and is edited by Dr. Henry R. Harrower. It appears as a continuation of *The International Digest of Organotherapy and The Organotherapeutic Review.* This little journal is published monthly at a subscription price of $1.00 a year.

The interrelation between various, in fact many, skin lesions and certain endocrine disfunctions is undoubted and has been demonstrated conclusively. It is, therefore, of interest to have the most important information on that subject collected, as it has been done in the latest issue of *The Endocrine Survey.* There is much useful information contained in this little booklet which can be had from the publishers at a subscription price that is nominal.

MORRIS: "DAMPHOUL THOUGHTS"

Damphoul Thoughts of a Small-Town Doctor. By G. Blythe Morris, M. D. Chicago. 1923. $1.50.

Here is a collection of reprinted articles, poems and other things which have appeared partly in medical, partly in lay literature in the course of years. We imagine that the dignified, old-time physician of the frock-coat and silk-hat variety will be rather scandalized on reading some of Morris' effusions. We are quite sure that that same dignified gentleman is quite apprehensive when, at the meeting of the medical society, Dr. G. B. Morris rises to take part in the discussion. There is a charm in the absolute freedom of expression, the absence of inhibitions, the various kinds of daring which Doctor Morris manifests in what he has to say. Some of these things are so damnably true as to be shocking—to our "refined" sensibilities. Some are expressed in so unusual language that they are vastly entertaining. In any case, the reaction of a small-town doctor to the various problems of life and the fact that he has the courage of characterizing his effusions as "Damphoul Thoughts" make the little book attractive and it affords an evening's reading which is in part amusing and entertaining, in part stimulating and, possibly, provoking. The latter is good for the soul. We believe that the money paid for the book is well spent.

"THE CASTAWAY"

The Castaway. By Carlos Medico. Dedicated to young physicians of Vision, who hear the Christ and answer, "Send Me! Send Me!"

This little pamphlet contains, in the form of a poem, the story of a man who had a vision to do God's work in answer to the Divine Call, and started on the upward way but yielded to temptation, turned aside and became a castaway; this despite his professional success. The Reviewer does not think that he violates a confidence when he says that Carlos Medico is Dr. Charles Fox Anderson of Lexington, Ky.